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ABSTRACT

This guidebook is designed to assist elementary grade teachers in following an outdoor education curriculum developed in Wausau, Wisconsin, though the activities are applicable to most areas. The book contains outlines of materials and lessons to use and evaluate so that a final guidebook can be produced that will be of the most use for teachers. This outdoor education approach encourages observation and interdisciplinary study. The curriculum stresses observation skills, social behavior, the environment, and the conservation of natural resources. Field trips are encouraged and a schedule of locations and their descriptions is included. Each lesson is divided into a number of components. The grade level, K-3, is given along with the objective, concept, and purpose of the lesson. The teacher is then given guidelines for introducing, developing, extending, and fixing the concept. Where materials are required, they are listed, along with audio-visual materials that supplement the lesson. (MA)

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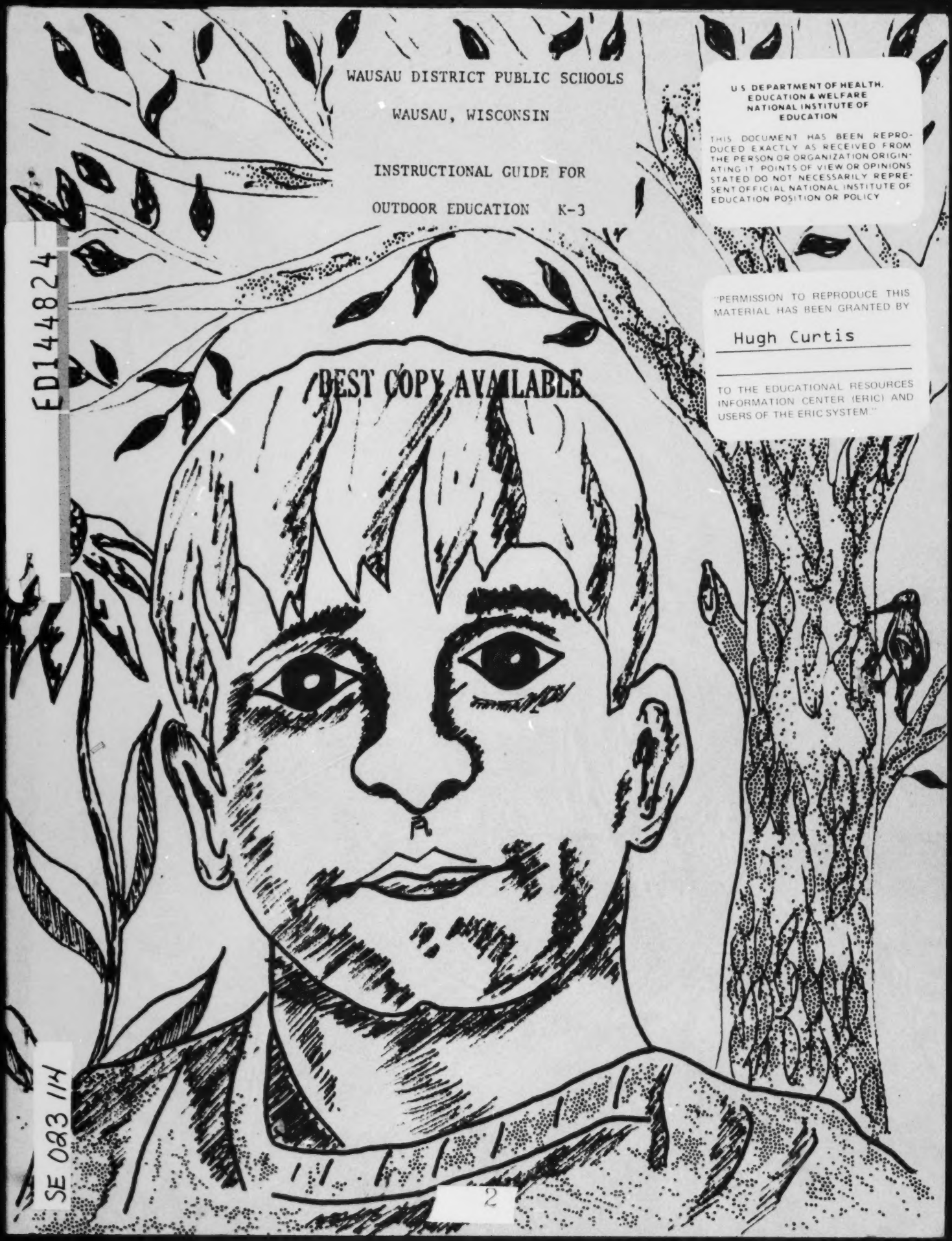

WAUSAU DISTRICT PUBLIC SCHOOLS

WAUSAU, WISCONSIN

INSTRUCTIONAL GUIDE FOR OUTDOOR EDUCATION K-3

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FOREWARD

Our entire environment presents much evidence that there has been an insufficient amount of conservation taught in our schools. With this thought in mind, a curriculum has been established for the teaching of a formal outdoor education class.

The materials and lessons outlined in this guide are to be used and evaluated prior to the preparation of a formal document. The lessons developed follow the outline for the curriculum in accordance with the philosophy established by the Outdoor Education Committee.

It is our hope that the selected teachers will use the material and on the appropriate sheets indicate the strengths or weaknesses of the guide or changes that should be considered.

With your help, the Outdoor Education Curriculum Guidebook will become a useful guide for all teachers.

WAUSAU PUBLIC SCHOOLS

WAUSAU OUTDOOR EDUCATION CENTER

OUR OUTDOOR EDUCATION PHILOSOPHY

Outdoor education should be a method of conceptual learning which permits man's full use of all his senses, to be employed in his search for the truths of nature and of his own life. It should be a tool which can be used to better enrich understanding of the relationships to his natural environment through total involvement in the learning situations outside the regular classroom both social and environmental. It would be an interdisciplinary approach to education which allows the total study of life's meanings.

THE ORGANIZATIONAL PLAN OF THE CURRICULUM

The conceptual scheme used for this curriculum is as follows:

> Living things are interdependent with one another and a product of their heredity and environment in a universe which is in constant change.

An attempt was made to write all the objectives of each lesson as a "behavioral objective". It is hoped that this type of an objective would enable the teacher to accurately measure the effectiveness of the lesson.

Throughout the lessons, activities have been incorporated that ~~would increase the~~ student's ability to observe the things around them and be able to classify the things which have been observed. This classification is nothing more than the "sorting" of different "kinds" at the primary level. Specific identification and true classification will be incorporated as the student progresses.

Four areas of curriculum content were chosen to incorporate the previously mentioned ideas. Specific lessons have been developed to assist the teacher with some ideas and methods but it is not intended to limit the teacher in any way.

The curriculum has been developed in the following areas:

1. Observation Skills
2. Social Behavior
3. Environment
4. Conservation of Natural Resources
   - a. People
   - b. Soils
   - c. Water
   - d. Air
   - e. Minerals
   - f. Wildlife
   - g. Forests

FIELD TRIP SCHEDULE

Each classroom will take at least one field trip to one of the Outdoor Education facilities sometime during the school year. In order to avoid duplication, the following schedule should be adhered to whenever possible:

Grade	Location
K	Marathon Park
1	Berlin
2	Oak and Fern Island
3	John Muir
4	Rib Mountain
5	Horace Mann
6	Sr. High School Forest

MARATHON PARK

Marathon Park is classified as a Community Park and is located on the south side of West Stewart Avenue on Wausau's West side.

Facilities available include: drinking water, parking, comfort station, open and closed shelters, playground, ballfield, tennis courts, ice rinks in season, picnic area, hiking path, and nature area. All facilities are available free of charge with the exception of the closed shelter. This shelter must be reserved prior to the time of actual usage and a $10.00 fee is charged for its use. Reservations can be made through the office of the Park Superintendent located in the Marathon County Court House. Phone 842-2141.

The park has a total acreage of 78 acres with the extreme southern area being devoted to a nature area. The nature area is made up primarily of second growth white pine. The trees are healthy and of good size and the pupils can get an excellent impression of the Wisconsin piney woods of the great logging era one hundred or more years ago.

BERLIN OUTDOOR LABORATORY

The Berlin Outdoor Laboratory was established in 1963. The forest area consists of approximately fifteen acres. The area is really an over mature stand of coniferous and deciduous trees which would have been typical of the pre-logging days. One can find every major species of coniferous trees, excluding Red and Jack Pine, growing in their natural environment. The area provides an excellent example of forest succession.

A pond was dug for the study of aquatic life and a stream flows through the entire forested area. The area further provides typical examples of ecological life in a meadow, marshland, and forest environment.

A plantation of conifers was started on the south campus boundary.

The Berlin Outdoor Laboratory has a self guiding nature trail. The area is recommended for first grade students. Arrangements for visiting the area with students may be obtained from the Berlin School Principal.

OAK ISLAND--ISLAND OF FERNS COMPLEX

Oak and Fern Islands are classified as Community Parks and are located just north of the George Stevens Memorial Bridge on the Wisconsin River.

Facilities available include: drinking water, parking, comfort station, open and closed shelters, playground, ballfield, tennis court, coasting hill in season, picnic area, hiking path, and nature trail. All facilities are available free of charge with the exception of the closed shelter. The closed shelter must be reserved prior to the time of actual usage and a $10.00 fee is charged for its use. Reservations can be made through the office of the Park Superintendent located in the Marathon County Court House. Phone 842-2141.

The parks have a total acreage of 27.2 acres. The Oak-Fern complex is a natural reservation type area. The trees are primarily of the northern hardwood variety. Many of the trees are mature and the ground cover and shore lines provide an excellent opportunity to observe the relationships between plants and their aquatic surroundings. Fern Island is especially interesting with the forest-water relationships available to the observer. A foot bridge connects Fern and Oak Islands. Channeling has been completed to eliminate stagnant water and these facilities provide an excellent opportunity to observe nature within the city limits of Wausau. The great flocks of waterfowl which inhabit the area is an added bonus to this outdoor laboratory.

RIB MOUNTAIN STATE PARK

Rib Mountain is one of the highest elevations in the State of Wisconsin. It stands above the neighboring country because it is composed of very hard rock (quartzite) which has been worn away more slowly by the elements than the softer rocks of the lowlands.

Just as the stump covered field enables us to see the forest that has been cut, so by the study of old worn away stumps of mountains, the geologist is able to picture the mountains that covered Wisconsin. During countless ages these mountains have been worn away to a plain. Rib Mountain rises to a height of 1,940 feet above sea level.

Rib Mountain is a monadnock which owes its superior elevation to the fact that it is composed of quartzite and therefore has suffered less erosion than the granite which surrounds it. The rock formations tell us that the area was not glaciated.

The area is a State Park and has the following facilities:

1. Drinking water
2. Parking
3. Comfort station
4. Camping area
5. Nature trails
6. Picnic area with fireplaces
7. Observation tower
8. Refreshments and concession stand
9. Ski trails
10. Ski tow

HORACE MANN LABORATORY

The Horace Mann Laboratory is an 80 acre site located next to the Nine Mile Swamp. This outdoor laboratory has an open shelter and outdoor toilets but there is not a well available. It is suggested that fifth grade students utilize this area.

Pine trees dominate the tree species at the forest with several plantations as well as areas with natural seeding.

Several habitate improvements have been completed by the Department of Natural Resources in the Nine Mile Swamp area adjacent to the school forest which provide additional areas for study.

There are several nature trails in the school forest and flowages in the Nine Mile Swamp Area that provide excellent areas of instruction. It is suggested that the teacher obtain the assistance of one of the staff members in outdoor education to assist them with a field trip unless they are familiar with the area.

JOHN MUIR LABORATORY

The John Muir Laboratory is located two miles north of Mosinee on old Highway 51. This forest is 67 acres in size and has an enclosed shelter house. Outdoor toilets are provided but there is not a well on the site.

This outdoor laboratory has a wide variety of plant life and soil types, ranging from wetlands to upland hardwoods. There are several areas of pine plantations and an old rotten granite pit which provides additional areas for study.

Several nature trails have been established in the area. It is suggested that the teacher tour the area prior to the field trip or obtain the assistance of a staff member in the field of outdoor education.

WAUSAU DISTRICT PUBLIC SCHOOLS OUTDOOR EDUCATION CENTER

In 1941 the school forest was started, with 306 acres of land being donated by Arthur W. Prehn and Erwin Prehn of the City of Wausau, the Mosinee Paper Mills, and Marathon County.

In 1942 the first tree plantings of 12,000 Red Pine took place under the direction of Ray Burton and G. W. Bannerman. Planting was done by the first Conservation Club organized in Wausau Senior High School by Mr. Burton.

1943 saw an additional 12,000 Red Pine planted.

In 1944 40,000 Red and White Pine were planted by 300 Conservation Club Members. This is believed to be the largest tree planting in school forest history of both the state and nation, in which the work was done by hand in one day.

In 1945 15,000 Red and White Pine were planted. The School Forest Lodge, originally a Civilian Conservation Corps Barracks, was moved to the School Forest, during the late winter. Mr. Burton and Lyle Fuller, of the Marathon County Road Commission were in charge. Henry Fenderer did the moving. The building was cut into three parts, each part moved separately and then reassembled at the school forest.

In the years of 1947-48-49 30,000 Red and White Pine were planted.

10,000 Red and White Pine were planted and the first School Forest Board of Directors was formed in 1950.

In 1951 6,000 Red and White Pine planted in areas where previous seedlings died. Work was started on paneling in the lodge.

In 1952 5,000 Red Pine were planted. Work was done on the Nature Trail and in the timber lot. Paneling was continued in the lodge and a well and drain were built.

In 1953 another 5,000 Red and White Pine were planted. Work continued in the lodge. Physical Education equipment room was built in the classroom area of the lodge. Timber cutting and disease control was conducted in the forest. 1,000 wildlife shrubs were planted to promote propagation of wildlife. Flag pole was erected in front of lodge. Paneling continued and work was done in the parking lot. Biology classes were held at the forest.

In 1954 the school forest was used by the Elementary Schools for the first time. 5,000 Red and White Pine were planted.

During 1955 5,000 Red Pine were planted and 1,000 wildlife shrubbery plants. Stone gate posts were built at the entrance to the road leading to the lodge.

5,000 Red Pine, 1,000 wildlife shrubs, 100 Balsam fir were planted in 1956. Concrete block foundation was started for the lodge.

In 1957 an electric power line was brought into the forest and the lodge was wired. A film for the "Voice of America" was filmed at the forest by the Wisconsin Conservation Department. 70 Christmas trees were sold at the school lot. The foundation of the lodge was completed.

7,000 Red Pine, 100 Colorado Blue Spruce, and 250 Balsam fir were planted. The athletic field was improved and the new roof was put on the lodge.

The big event in 1959 was a memorial program for the school forest, held at the Senior High School on May 1. Lt. Gov. Nash was the main speaker. Many members of the first Conservation Club were present, besides the many people who helped contribute to the growth of the school forest. Mr. Burton was presented a gift, as a token of appreciation for the many years of service to the school forest. Lt. Gov. Nash planted a Blue Spruce in front of the lodge commemorating this event.

In 1960 the improvements that were made to the club house included a new blackboard, chimney screen, new back step, a new ceiling in the center room, and repair to the shutters. The first cabin was built for the Outdoor Education program. Mr. Gjetson supervised the work of the students and teachers. The Wausau Senior High School paid for this cabin.

In 1961 a new ceiling was installed in the dining room and kitchen of the lodge. The second cabin was constructed with the funds being made available by the Junior and Senior High Schools. The elementary school PTA's contributed a fund of money to be used to purchase equipment needed in the lodge. The lodge was improved by the installation of a new tile floor in the kitchen, dining hall, and lounge. Kitchen equipment was obtained from the former high school cafeteria. A new sink, hot water heater, and refrigerator were placed in the kitchen. The elementary school camping experience was held for the first time at the Wausau Outdoor Education Center.

Cabins three and four were constructed in 1961-62. Wausau Senior High School financed these two buildings; however, the Elementary School PTA's reimbursed the Senior High School for Cabin Four over a four year period. The new ceiling and tile floors were completed in the Lodge. $550.00 was invested in hickory furniture for the lounge area, and new tables were

purchased for the dining room. A gate was installed in the driveway leading to the camp campus by the Senior High Metals Classes. Over 3,000 people made use of the Outdoor Education Center during 1961-62.

During the summer of 1964, a shower and washroom unit was constructed. The museum was also completed. The garage constructed by students of the Senior High advance woodworking class was also completed at this time.

In 1964, forty additional acres were purchased with Senior High activity funds. This was the Slagoski property.

During the summer of 1966, an amphitheater was built by N.Y.C. students. Materials were paid for from the Ray Burton Memorial Fund. A memorial plaque was laid indicating that this was to be the Burton Memorial.

In 1966, a shelter was built in honor of C. W. Bannerman for his many years of service to the Wausau District Schools. Funds to complete this project were donated by Elementary School Personnel.

A council ring was completed in 1967. Part of the work was done by N.Y.C. students during the summer. The rest of the work was completed by Senior High Conservation Club members.

During 1968, a counselors cabin was completed. Funds for this structure were taken from pulp sales. Also, during the 1968 school year, the fifth cabin was constructed. A range, refrigerator, and other kitchen equipment was purchased from the Marathon Park Commission to improve the kitchen facilities.

During the summer of 1969 an obstacle course was built and the sixth cabin was completed.

Observation Skills - Kindergarten
Lesson 1

Objective: The pupils will develop an awareness of the immediate environment through the sense of sight.

Concept: People do not always interpret correctly what they see.

Purpose of the Lesson:

To help pupils in their ability to observe.

Introducing the Concept:

Use students to develop preliminary concepts of likenesses and differences.
The teacher asks the group if they have ever watched their mother do the laundry. This question might then be asked: What does it mean to sort the laundry? Why does your mother sort the laundry? Can you sort the bag of laundry that I have here? (The bag of wash clothes would then be dumped in the middle of the group. Have students sort the clothing by darkness and lightness.)

Developing the Concept:

After spending some time with sorting the laundry, have the students see if they can sort themselves by likenesses and differences, e.g.

1. short - tall
2. slim - stout
3. light hair - dark hair
4. light eyes - dark eyes
5. light clothing - dark clothing

Extending the Concept:

Differences are pointed out only to help students to develop an awareness. The concept of likeness can be pointed out with members within each sorted group.

Fixing the Concept:

Children are asked to draw pictures of themselves using a hand mirror to develop the self-image concept.
Children may also be asked to trace their hands and cut them out of paper.
Children may make plaster casts of their hands or feet.
(Compare the size of feet or hands to point out likenesses or differences.)

Materials Required:

Bag of laundry (Check School lost and found box)
Small hand mirrors.

Suggested Filmstrips:

1294 "Big-Small-Short-Tall
577 Similarities
578 Differences
1841 Listen/ Record Part I
1842 Listen/ Record Part II
1843 Look About You/ Record Part I
1842 Look About You/ Record Part II

Observation Skills - Kindergarten
Lesson 2

Objective: The pupils will be able to recognize the different objects within the classroom that are made of wood.

Purpose of the Lesson:

To develop an awareness of the many different uses of wood.

Concept: Many things in our environment are made from wood or wood products.

Introducing the Concept:

Have children sit in a circle around the collection of materials. Have children identify each toy and what it is made of.

Developing the Concept:

Ask the students if they can sort the materials according to their differences. Children should begin to recognize differences in materials. The end result should be a sorting of three groups. Emphasis then should be placed on those objects made of wood.

1. Where does wood come from?
2. What other things can you find in the classroom that are made of wood?

Fixing the Concept:

Have students go through old magazines and collect pictures of objects that are made of wood. Pictures can be mounted and put into a simple booklet.

Materials Required:

Classroom toys (include metal, plastic, and wooden toys)

Observation Skills - Kindergarten
Lesson 3

Objective: The pupils will be able to recognize the difference between broadleaf trees and evergreen trees by their leaves.

Purpose of the Lesson:

To help children to develop an awareness of the two major groups of trees--evergreen and broadleaf.

Concept: Children can recognize the two major groups of trees by the shape of the leaves.

Introducing the Concept:

Preferably, students should be taken out of doors to observe differences in trees. Ask: Are all trees alike?

Developing the Concept:

1. Have children describe the shape of a broadleaf tree.
2. Have the children describe the shape of an evergreen tree.
3. Ask the children to make a comparison of the two trees noting the difference in shape.
4. Collect a leaf sample of the two types of trees.
5. Have the children describe the differences in shape and color of the leaves.

Extending the Concept:

Make comparisons in shapes of leaves from various broadleaf trees. Make comparisons in shapes of leaves of evergreen trees noting that there are differences in shapes of the needles within each grouping.

Fixing the Concept:

Have children bring leaves to school. They may be pressed between newspapers weighted with books. After several days of drying they will be smooth and flat. Leaves may be waxed by placing pressed leaves between sheets of waxed paper and ironing with a warm iron. Students can mount the pressed leaves according to sorted shapes. Make crayon or chalk prints of leaves. Use leaves for classroom decorations. Have students make drawing of trees depicting the different shapes. Discuss

with students things in their classroom that are made of wood.

Maple leaf - like the shape of your hand
basswood - like a big heart
white pine - five needles
red pine - two long needles
jack pine - two short needles
spruce - one needle
oak leaf - wider at top than bottom

Materials Required:

Examples of both types of trees (evergreen and broadleaf)

Suggested Study Print:

Broadleaf Trees

Observation Skills - Kindergarten
Lesson 4

Objective: The students will be able to identify the requirements needed for plant life.

Concept: Children know that soil, water, and air are required for plant life.

Purpose of the Lesson:

To help children realize that soil, water, and air are essential to plant life.

Introducing the Concept:

Preferably, students should be taken outdoors for this lesson.

1. Have children attempt to find a living plant on a paved area. (Playground, sidewalk, driveway, etc.)
2. Have children determine why these plants grow in the cracks of the pavement.
3. Compare the number of plants in pavement to a lawn area.
4. Show how the pavement prevents seeds from reaching the soil or plants from reaching air except in cracks.

Developing the Concept:

1. Put bean seed in moist soil and another in water only.
2. Put small plant under glass jar to eliminate source of air (seal bottom with clay).
3. Plant a seed in small pot of soil but never water the plant after it has sprouted.
4. Are there places where no soil is found? (sidewalk, streets, buildings)
5. Are there places where no water is found? (moon, desert)
6. Are there places where no air is found?

Extending the Concept:

Approximately a week after planting the seeds compare and discuss what happened to the seeds planted under conditions where one element is eliminated demonstrating plants need for soil, water, and air.

Fixing the Concept:

Have students make a list of "How We Can Help Plants Grow".

1. Water 2. Cultivate 3. Fertilize
4. Pull Weeds

Social Behavior - Kindergarten
Lesson 5

Objective: The students will develop respect for self, other, and property.

Concept: Individuals develop self-respect, respect for others, and respect for property.

Purpose of the Lesson:

To impress on children the need for obeying school rules. To help the child grow in understanding the part he or she must play in making our school a good school. To ultimately help the child to grow into a good citizen.

Introducing the Lesson:

Teacher read a story while one student plays the phonograph, another student plays rhythm instruments, and another is moving about the room sharpening pencils or other noisy activity. Ask: If we were allowed to do exactly as we pleased at all times, what kind of school do you think we would have? Would there be any need to come to school? Why not?

Developing the Concept:

Why do you think we have school rules? (So we can learn how to be safe, to get along with people, to be responsible citizens).
Dramatize the following responsible behavior:

1. Taking turns at the water fountain.
2. One child passing out the scissors.
3. One child picking up paper from the floor.
4. Picking up library books and returning them to the shelf.
5. Putting all the toys away.
6. Hanging up clothes in the entry-way.

Extending the Concept:

Invite the principal to come in and talk with the children about school rules. This will also give the children an opportunity to become acquainted with the principal.

Fixing the Concept:

Ask children to draw themselves participating in responsible behavior. Mount these pictures on a display to serve as a continuous reminder of responsible citizenship rules.
Write an experience chart on school rules. e.g.

1. Take turns; 2. Put toys away;
3. Hang up clothes

Social Behavior - The Family Group - Kindergarten
Lesson 6

Objective: The students recognize that they learn from each other.

Concept: Individuals learn from each other. Self-respect by the individual is developed or maintained through working with others.

Purpose of the Lesson:

To help the children learn that we should be a participating and valued member of "the group" at home and at school.

Introducing the Concept:

The teacher holds up the dolls and asks the class to identify each member of the doll family.
Ask: How many members in this doll family?
How many grown-ups? How many children?
How many boys? How many girls?
Which is the smallest member? Which is the largest?

Developing the Concept:

The teacher develops the understanding of the child's place and responsibilities in the family group by questions and answers.

1. Tell me about the members of your family.
2. Who is the head of the family?
3. What does he or she do for you and your brothers and sisters? (He protects the family, works to provide food, clothing, and shelter). (Some children have guardians).
4. Where does your mother work? (At home, often outside the home, to help provide for the family).
5. What are the special duties of your mother at home? (Cooking, cleaning, laundering, caring for the baby, gardening, etc.)
6. Why are brothers and sisters important members of the family?
7. What do you do to help other members of your family? (Care for baby, clean house, wash dishes, feed pets, weed gardens, etc.)
8. Why do you think the baby is an important member of the family? (He is fun to watch and play with; to rock and sing to; to teach new words and games, etc. The baby contributes happiness).
9. What is a happy family? (Children conclude that a happy family is one which loves each other and works together).

10. What can you do to be an important member of your family?

Extending the Concept:

The teacher then suggests:

1. Pretend that our class at school is a family. Who would be the head of the family?
2. Who would be the brothers and sisters? (Teacher and class)
3. What could each of you do to keep our school family happy? (The teacher and children will be kind to each other, love each other and work together).

Extend the understanding of the concept through key words on a vocabulary chart:

1. family
2. duties
3. shelter
4. provide

Fixing the Concept:

Children are asked to draw pictures of their families to place on the bulletin board. Children are asked to find pictures in magazines at home of families doing things together and bring them to school to show to the class.

Materials Required:

Use Doll family from kindergarten play area (include father, mother, sister, brother, baby)

Suggested Filmstrips:

76-81 Living Together in School Series
2022 Working Together in The Family

Social Behavior - Kindergarten
Lesson 7

Objective: The class will develop a respect for property regardless of ownership.

Concept: Respect for property is developed and maintained through working with others.

Purpose of the Lesson:

To develop a respect for property.

Introducing the Concept:

Prepare before class begins several examples of personal property and public property such as cap, mittens, dictionary and pencil sharpener. Demonstrate, using the children, that personal property belongs to one child and public property belongs to everyone.

Developing the Concept:

Discuss the care of property both public and personal. Have the class suggest and name things which are harmful to all property; e.g. rough treatment, litter, defacing, etc.

Extending the Concept:

Take the class on a tour of the building and outside play area. The class may take a short "walking" field trip to some public facility in the neighborhood of the school. Examples of disrespect of both personal and public property should be cited by both pupils and teacher.

Fixing the Concept:

Children are asked to suggest examples of personal and public property.
Children are asked to suggest examples of disrespect for property regardless of ownership.
Children are asked to suggest ways in which disrespect can be corrected.
Children begin various activities to correct some of the examples of disrespect cited.
Children should pick up litter, wash off a wall, remove pencil or crayon marks, straighten out toys and cupboards, remove marks from books, etc.

Environment - Kindergarten
Lesson 8

Objective: The pupils will realize that care must be taken not to destroy their environment.

Concept: People need to work constantly to conserve natural resources.

Purpose of the Lesson:

To help children become aware of the beauty of nature and discover that they have a responsibility for the conservation of our natural resources.

Introducing the Concept:

Make a picture by arranging the flannel board materials to create a boy and girl in the forest on a picnic. Retain the cutouts of the trash, dirt, and burnt stumps for later, along with the old man and the old lady.

Developing the Concept:

Together with the class make up a story about the picnic in the forest. When the story ends the boy and girl leave the picnic site with the campfire burning and put pieces of trash on the flannel board to resemble litter.

Extending the Concept:

Describe to the class how the litter catches fire and how the forest burns. Replace the picture with just the soil and burnt stumps. Then replace the children on the picture in the burnt-out forest for a picnic. Explain that the difference in the environment between the first scene and this one. Notice the absence of all living things except for the boy and the girl.

Fixing the Concept:

Return the pretty picture of the forest to the flannel board. This time use the old man and the old woman instead of the boy and girl. Explain that the boy and girl have grown old before the picnic spot has returned to its former beauty. A lifetime is a long time to wait for your next picnic!

Required Materials:

Flannel board and Flannel cutouts of trees, shrubs, flowers, animals, grass, bits of white felt for trash, soil, burnt stumps, boy, girl, old man, old woman and campfire.

Environment - Kindergarten
Lesson 9

Objective: The pupils will be able to list the things found in their natural environment.

Concept: People will have no real concern for conserving their natural environment unless they are aware of it.

Purpose of the Lesson:

To help students to become aware of and appreciate beauty as an important dimension in man's life.

Introducing the Concept:

Children should be taken out of doors on a "walking" field trip and the teacher should take along a notebook and pencil. Tell the children that they are going for a walk and that they should observe all of the different things that they see. As children list things the teacher should write them down.

Developing the Concept:

Upon returning to the classroom and using an experience chart, have the children list all the things they can remember. Tell them that you will be able to help them by using your notes of the things that the pupils listed while outdoors. Pupils will list things both natural and unnatural. Pictures or rebuses may be used with printed vocabulary words.

Fixing the Concept:

Have children make an illustration using crayons of the most interesting thing they observed in their environment.

Materials Required:

Notebook and pencil for teacher.

Environment - Kindergarten
Lesson 10

Objective: The pupils should be able to list those things that are a part of the natural environment and those things that are man-made.

Concept: Often times people have destroyed the natural beauty of the environment by buildings and other structures.

Purpose of the Lesson:

To help pupils to recognize what things are part of their natural environment and what things are man-made.

Introducing the Concept:

Use flannel board with cutouts of things that pupils discovered on field trip conducted previously. Review with the children the different things that they observed as being part of their environment. Refer back to experience chart. Use flannel board with cutouts of the items on the experience chart.

Developing the Concept:

Tell the students that today we are going to make pictures of the things that we saw yesterday on our field trip. Have the students again list the things and have another student or students place the items on the flannel board. Ask the students to sort the natural things from those that were built by man. Have some extra buildings or structures that you want to add to the flannel board picture. What happens to the natural things? e.g. trees may have to be taken out to make room for buildings. What happens to the beauty of nature?

Fixing the Concept:

Have children find pictures in magazines of man-made things and natural things. Have the children sort the pictures according to natural and unnatural. Make two charts depicting each.

Materials Required:

Flannel board.
Cutouts of things students discovered on field trip.

Environment - Kindergarten
Lesson 11

Objective: The pupils will begin to accept responsibility for their environment.

Concept: Individuals learn from each other. Respect for property is developed and maintained through working with others.

Purpose of the Lesson:

To help each child grow in ability to accept responsibility for his environment and to develop respect for property regardless of owner.

Introducing the Concept:

Prepare before class a litterbug from a paper bag. Teacher may dramatize what a litterbug does. He is unhappy and spills his contents on the floor. Ask: What is a litterbug? What does a litterbug do? Are you a litterbug? Have you ever seen a litterbug? Tell me about places you have seen where litterbugs have been.
(Turn litterbug over, attaching handle and show how a litterbag is happy and keeps trash inside.)

Developing the Concept:

Ask: What is litter? (anything out of its proper place) Make a list of words on chalkboard of things that are litter: egg, paper, banana peelings, candy wrappers, sticks, etc. What can we do to keep from becoming litterbugs?
Children suggest: Use trash cans for all our trash, never throw litter out of cars, etc.

Extending the Concept:

Take the class on a tour of the playground and buildings to examine the trash receptacles, filling the litterbags as they go. Count number of receptacles and determine if there are adequate numbers to accommodate trash. If not, write a letter to school principal so that one might be obtained. Before returning to classroom dump out all litter in litterbags and compare amount collected by boys vs. amount collected by girls.

Comment on amount found in all when put in one place and then place all trash in receptacle after contest.

Fixing the Concept:

(One or more of the following activities may be done)

1. Make litterbug signs for school corridors.
2. Individual litterbags for each child in the room to be taken home for family car.
3. Children look for litter on way to and from school, clean it up, and report such activity to the teacher.
4. Children sing the jingle to the tune of DID YOU EVER SEE A LASSIE.

   Oh, here comes a neaterbug, a neaterbug, a neaterbug,
   Oh, here comes a neaterbug, just see what he'll do.
   (Neaterbug picks up trash and puts it in litterbag.)
   Oh, I want to be a neaterbug, a neaterbug, a neaterbug,
   Oh, I want to be a neaterbug and so do you!

Materials Required:

Brown paper bags for each child.
Construction paper, glue, crayons, other art materials.

Environment - Kindergarten
Lesson 12

Objective: The student will be able to recognize the changes in our environment caused by the weather.

Concept: Weather is part of our environment.

Purpose of the Lesson:

To make students aware of how weather affects our environment.

Developing the Concept:

Have the children tell about all the different types of weather that they can remember. Have the children sort the different types of days into different times of the year. e.g. rain in summer, spring, fall, snow in winter, etc. Show how weather changes during the four seasons.

Extending the Concept:

Ask: How does weather affect us in our daily lives? Show the changes needed in clothing throughout the year, summer vs. winter, changes in our activities, indoor vs. outdoors, etc. How does this change in weather affect animals? The following concepts should be discussed: birds migrate, bears hibernate, deer and other animals grow heavy winter coats. Food is harder to find because of the snow. Some animals store food, others find special homes to hibernate in.

Fixing the Concept:

Have the students bring pictures of different activities people and animals are involved with due to changes in weather conditions. Allow the children to sort the pictures for proper bulletin board displays.

Audio Visual Materials:

Show selected filmstrips from the series: "Autumn is Here" 582-584, "Spring Comes" 1646-1650, or "Our Weather" 1973. PTA Library.

Conservation of Our Natural Resources - Kindergarten
Lesson 13

Objective: The pupils will identify positive behavior which leads to the wise use of leisure time.

Concept: Children can find many ways to use leisure time in our environment.

Purpose of the Lesson:

To help children learn to use leisure time wisely through appreciation of our natural environment.

Introducing the Concept:

Arrange a lemonade stand in front of the class, complete with paper cups and a pitcher of lemonade.
Ask: 1. What does this stand make you think of?
2. When is a good time to have lemonade stands?
3. Could you have a lemonade stand at your house this summer?

Developing the Concept:

Today we are going to think of some other things we can do to have fun at home with our families this summer.
1. What can you do this summer that you could not do last summer? (read, write, ride a bike, etc.)
2. Can you make a store? A play house? A lemonade stand?
3. What kinds of collections could you make? (Leaf, seashell, rock, insect, cones, flowers, nuts, feathers.)
4. What else can you think of to do? (Plant a garden of your very own.)

Extending the Concept:

What could we do for our families that would help make vacation time more pleasant for them? Through guidance elicit the following suggestions:

keep things picked up
baby-sit for mother
clean up when we finish playing
pick up litter
pick up our own room
always be willing to help
sweep walks
run errands
make our bed
dry dishes
take out trash

Fixing the Concept:

Give children a surprise. Put a few seeds (corn, beans, flowers) in each child's cup which is saved after drinking the lemonade. The seeds can be planted and in a few days they will have a plant to take home.

Ask:
1. How do you plant seeds?
2. How deep in the soil will you put them?
3. What do seeds need in order to grow?
4. Could you plant them outdoors in a garden?
5. What do you do with your free time at home?
6. What are some safety rules that we should follow?
   i.e. fasten seat belts in car
   ride single on bikes
   wear life vests in boats

Note: Parents may appreciate a list of things the child can do during summer vacation. Such a list could be sent home with each child.

Materials Needed for the Lesson:

Paper cups, lemonade, boxes for stand, flower seeds, soil, water.

Conservation of Our Natural Resources - Kindergarten
Lesson 14

Objective: The pupils will know that soil comes from rocks.

Concept: Soil comes from rocks.

Purpose of the Lesson:

To understand that rocks form soil.

Introducing the Concept:

Have pieces of sandstone, limestone, or building brick placed on a demonstration table. Place some plain white paper under the rocks.

Ask: 1. How can we make soil from these rocks? The class will soon discover that they can make soil particles by rubbing the rocks together.

2. How do rocks make soil when no one rubs them? Elicit the following responses: wind, rain, moving water, plant roots, freezing, etc.

Extending the Concept:

Spread a half pail of garden soil out over some newspapers. Let the children examine the soil, look for pebbles and tiny pieces of rock. Encourage the pupils to smell and feel the soil. The teacher explains the parts of the soil. (Dead vegetation, seeds, sand, small animal life, etc.)

Fixing the Concept:

Soils are important. Children may plant seeds in containers if they already have not done so. Children may look for interesting rock specimens to use as paper weights. They may be painted with tempera paint and then varnished or they may be used as they found them.

Materials Required:

Pieces of sandstone, limestone, or building brick. A half pail of garden soil, some white paper, magnifying glasses, and containers to plant seeds.

Audio Visual Materials:

Suggested filmstrips: 1924 - "Rocks and How They Change"
659 - "Rocks and Minerals"

Conservation of Our Natural Resources - Kindergarten
Lesson 15

Objective: Children will be able to explain why water is important to plant life.

Concept: Water is important to all life.

Purpose of the Lesson:

To make children realize the importance of water.

Introducing the Concept:

Generate a discussion around the work of scientists and how they discover, prove or disprove scientific facts. Develop the meaning of experiment. Ask the children if they would like to be scientists and conduct some experiments. This lesson is done with controls to show how water is important. The results of this particular lesson will require several weeks.

Developing the Concept:

Develop a discussion around the following points:
1. Where does water come from?
2. For what things do animals use water"
3. For what things do plants use water?
4. List things for which you use water.
5. What would happen if all of a sudden we had no water?

Fixing the Concept:

Explain to the class that we can conduct some experiments just like scientists do. Set up the experiments using two carrot tops, one is placed in water, the other is not. Do the same thing with the sweet potatoes. Explain to the children what they are to watch for. Have the boys and girls plant a bean garden in the milk cartons provided for them. After the seeds are planted, ask the children what must be done to the seeds in order for them to come up. Water all the seeds until they do come up. Continue to water half of the seeds. Observe with the children what has happened to the carrots, sweet potatoes, and the seeds. What conclusion can they then draw?

Materials Required:

Two carrot tops, two glasses, one filled with water. Two sweet potatoes, two glasses - one filled with water. Some bean seeds and empty milk cartons filled with ground.

Conservation of Our Natural Resources - Kindergarten
Lesson 16

Objective: Pupils will discover that man puts things in the air.

Concept: Man's activities affect our natural resources.

Purpose of the Lesson:

To help children discover the meaning of air pollution.

Introducing the Concept:

Display a cutout of the earth with air around it.
Discuss the air around the earth.
Ask: 1. When can we feel the air?
2. How does the air feel in winter? Summer?
3. What do we find in the air? (Clouds, smoke, dust, birds, kites, planes, insects, etc.

Developing the Concept:

Wet a spot on the chalkboard. Have the children observe what happens to the spot. Ask: Where does the water go? What is in the air? (Water)
Light a candle. Where is the smoke going? What else is in the air? (Smoke) Hold an object such as a spoon or a piece of glass over the candle to point out the soot that is put in air.
Pound two erasers together. What else is in the air? (Dust)
Show a picture of a truck, car, or bus. What do you smell when you stand behind a bus, truck, or car? (Fumes or an unpleasant odor)
Discuss the number of trucks, cars, and other vehicles that travel our roads, highways, and streets.

Extending the Concept:

What else puts unpleasant odors in the air? (Factories)
Have the children discuss factories that they may have seen that were putting smoke into the air.

Fixing the Concept:

Explain to the children that when the air gets full of things that make it smell bad, we say it is polluted.
Why do we not want the air polluted?
What can we do about polluted air?
Explain that too much polluted air can make us ill.
Have children draw, or illustrate in some way, ways in which man pollutes the air.

Conservation of Our Natural Resources - Kindergarten
Lesson 17

Objective: Pupils will be able to explain the ways in which rocks are alike and the ways in which they are different.

Concept: There are many different kinds of rocks.

Purpose of the Lesson:

To discover some of the ways in which rocks are alike and some of the ways in which they are different.

Introducing the Concept:

Have the children bring rocks to school that may be found most anywhere. Begin the lesson by placing the rocks on a table and asking such questions as:

1. How are these rocks alike?
2. How are these rocks different?
3. Are all rocks the same size?
4. Are they rough, smooth, sharp?
5. What colors are they?
6. How do they smell?
7. Are they hard or soft?
8. Do they all weigh the same?

Developing the Concept:

Divide the class into three groups. One group should have magnifying glasses. One group should have a pan of water. One group should have a piece of ceramic tile. The rocks may be examined by a magnifying glass, by washing off the materials that cling to it, and by the color it makes when rubbed against the ceramic tile. Some rocks will appear differently when they are wet and some will also smell differently. Examine a small smooth rock. Explain that the correct name for this type of rock is "pebble". Explain also that the pebble was once a large piece of rock but now it is very small and smooth. Have the class think up stories as to what might have caused the pebble to become what it is.

1. Erosion
2. Freezing action of water
3. Action of wind, waves, and sand.
4. Rocks travel - rivers, people

Ask the pupil to make up a story about the rock he brought to class.

Fixing the Concept:

Have the children separate the rocks into various sortings. (Rough, smooth, light, heavy, dark colors, light colors, etc.)
Have the children pick out the heavest rock, lightest, smoothest, roughest, most beautiful.

Materials Required:

Assortment of rocks, piece of ceramic tile.

Conservation of Our Natural Resources - Kindergarten
Lesson 18

Objective: The pupils will be able to recognize the differences between tame animals and wild animals.

Concept: There are many different kinds of animals. Some are wild and some are tame. The tame ones we call domestic.

Purpose of the Lesson:

To be able to recognize the difference between wild and domestic animals.

Introducing the Concept:

Pictures of domestic and wild animals can be displayed on the bulletin board. Books should be available with pictures of animals.

Developing the Concept:

Have the children name as many different animals as possible. Ask the children where the different animals live. Help the class to sort the animals on the basis of where the animals make their homes. (Ground, trees, water, etc.) Ask: Who builds the home for domestic animals? Who builds the homes for wild animals? What do wild animals do for us? What do tame or domestic animals do for us? What things do we do for domestic animals? What things do we do for wild animals?

Extending the Concept:

Have the children draw pictures such as: A domestic animal and his home; a wild animal and his home; or what animals do for us. Cut pictures from magazines of wild and domestic animals. Sort the pictures according to domestic or wild.

Special Note: Care should be taken that examples of live animals brought to school are properly taken care of and properly treated. Boys and girls should be taught to return wild animals back in the area where they found them. Students should be taught that it is unkind and a poor conservation practice to try and tame wild creatures.

Materials Required: Old magazines for cutting.

Audio Visual Materials:

Films: Animal Homes; Farm Babies and Their Mothers; Forest Babies.

Conservation of Our Natural Resources - Kindergarten
Lesson 19

Objective: Children will be able to name the three main parts of a tree.

Concept: Trees have three basic parts: the crown, trunk, roots.

Purpose of the Lesson:

To teach children the three basic parts of a tree.

Introducing the Concept:

Take children outdoors to observe various kinds of trees. Review Lesson 3 - Observation Skills. Develop a discussion around the parts of a tree.

Developing the Concept:

Ask the following questions to promote discussion:

1. What are the leaves for on a tree. (Leaves make food so the tree can grow.)
2. What does the trunk of the tree do? (Holds up or supports the leaves and serves as a passageway between the leaves and roots.
3. What do the roots do? (The roots get water and minerals from the soil that the leaves use for making food.) They also hold the tree in place. Roots are important because they help hold the soil.

Take the children outdoors and have them observe the three parts of a tree. Make a comparison between other plants and trees. Find a weed that will illustrate that some plants also have three basic parts. Make a collection of several types of plants with their root systems. Have the children sort the plants into two groups--those like trees and those not like trees.

Fixing the Concept:

Make a collection of plants for a group project. Plants that are like trees and plants that are not like trees.

Materials Required:

Picture or sketch of a tree on the chalkboard depicting the three major parts.

Observation Skills - Grade 1
Lesson 1

Objective: Pupils will develop an awareness of their environment through the sense of sight.

Concept: People do not always interpret correctly what they see.

Purpose of the Lesson:

Pupils will develop skills in observation using their sense of sight.

Introducing the Concept:

Have the children seated in a circle on the floor with a chair for the group leader.
Ask: What is a tool? Does your father have any tools? What are some examples of tools that your father has in his workshop? Continue to develop the concept of what a tool is and for what each is used. Then ask: If we were going on a nature hike, what would be the most important tool that we should take along? Children will respond with various responses, such as magnifying glass, shovel, etc. Develop the concept that the most important tool that we can take along is a part of our body. What might that be? (Our eyes)

Developing the Concept:

The teacher as leader of the group, should then instruct the children that today we are going to play a game to see how sharp we are with our eyes. The leader then tells the group to take a good look as to how you are sitting. Then have them close their eyes for five seconds and make some obvious body change. After five seconds, ask the students to open their eyes. What change did I make? Have the students give the correct response. Go through the same procedure and each time making the body change less obvious. Later give each of the students a chance to be the leader of the group.

Fixing the Concept:

After the above exercise, take the students outdoors and look for things in nature that change from season to season. Upon returning to the classroom have the children draw or illustrate in some way one thing in nature's scheme that makes changes because of the seasons.

Audio Visual Materials:

Suggested filmstrips:
1864 "The Seasons"
660 "Seasons"
133 "The Earth, the Sky, and the Seasons"
740 "All My Seasons
1972 "The Seasons"

Observation Skills - Grade 1
Lesson 2

Objective: Pupils will develop skills in observation and sorting.

Concept: It is easier to remember what we see if we can do simple classification.

Purpose of the Lesson:

To develop skills in observation and simple classification.

Introducing the Concept:

Have the pupils seated in a circle around the group leader. Review the skills of observation presented in Lesson One. In the second phase of this lesson use the bag of assorted junk. Spread the materials on the floor.

Developing the Concept:

Instruct the students that they are going to play another game using their eyes as a tool. Have the pupils take a good look at the materials on the floor. Then tell them to close their eyes and while their eyes are closed change or remove some object from the pile. Then ask the students to uncover their eyes. Ask: "What change did I make?" Give the children about 15 seconds to observe the materials and then cover with the dish towel. After getting the correct response put the item back as it was. Again have them study the materials for about 10 seconds. Have the class cover their eyes, make the change and have them observe for 15 seconds and then cover again. Ask: "What change was made?" Continued practice with the above procedure involving the students as much as possible will make the pupils aware of any minute changes that are made.

Fixing the Concept:

Discuss with the students that it would be easier to remember what we see if we could sort the materials by likenesses or differences. As an activity see if the materials that you have collected can be sorted. e.g., those made of wood, metal, plastic, etc.

Materials Required: Dish towel or scarf and one bag filled with assorted junk items.

Audio-Visual Materials: Film: Ways to Find Out. Page 7A.

Observation Skills - Grade 1
Lesson 3

Objective: Pupils will recognize that there are many kinds of plants living in a plant community through observation.

Concept: Plants grow in communities.

Purpose of the Lesson:

To develop observation skills and to help pupils understand that plants live in a community.

Introducing the Concept:

This entire lesson may be conducted out of doors.

Developing the Concept:

Review with the students the importance of their skills in observation. Activities presented in lessons one and two may need to be reviewed. Develop the concept of what a community is. (People living and working together.) Tell the boys and girls that today we are going outdoors to observe what a plant community is like. Proceed to take the children outdoors with the hula hoops. Place the hula hoops at random on the lawn. Have the children work in groups depending on the number of hoops available. The children will collect specimens of the various plant life growing within the confines of the hula hoop. Put specimens in a plastic bag. Take the collections back to the classroom.

Fixing the Concept:

Have the children sort the plants according to grasses and broadleaf weeds. Attempt to answer the following questions:

1. Where did the grass come from?
2. Where did the broadleaf plants come from?
3. What is a weed?
4. Which was greater in number, grasses or weeds?

Have students mount collections according to their simple classification.

Audio-Visual Materials:

Suggested filmstrips: 612 Finding Out about Things Around Us
653 Plants
654 Trees

Materials Needed: Several hula hoops and plastic bags for each group.

Social Behavior - Grade 1
Lesson 4

Objective: The children will understand that their life is dependent on plants either directly or indirectly.

Concept: Plants provide food.

Purpose of the Lesson:

To help the children see that life is dependent on plants directly or indirectly.

Introducing the Concept:

Develop a discussion around favorite foods. Ask: "What is your favorite food?" Children will give various responses. Ask the children if they would bring to school an example of their favorite food. The teacher may wish to supplement the food brought by the children to give a proper variety.

Developing the Concept:

After the collection of food has been displayed take each example and see if the children can trace where the food came from. Review sorting according to likenesses and differences. Tell the children that today we are going to classify these foods as to whether they come directly or indirectly from plants. We will call these foods that come from plants One Step foods and those that come indirectly from plant Two Step foods.

Example may include:

One Step	Two Step
apple	eggs
peanuts	jelly
potatoes	candy
beans	meat
peas	gum

Fixing the Concept:

Have children sort their favorite foods by one step or two steps. This can be done by making individual or group charts.

Extending the Concept:

Further discussion may be developed around the following points:

1. Why should we clean our plates?
2. What should we do with leftovers?
3. How should we treat plants?
4. Are all plants helpful to man?

Audio-Visual Materials:

Suggested Filmstrips: 1548 Green Plants are Important to Us
1906 How Green Plants Help Us

Environment - Grade 1
Lesson 5

Objective: Children will recognize that plants and animals are interdependent within a given environment.

Concept: Plants and animals are interdependent within an environment.

Purpose of the Lesson:

To give children an opportunity to set up and observe a terrarium.

Introducing the Concept:

The teacher introduces the lesson by reviewing the concepts of a community. The teacher then states that today we are going to make a community in this container. "What do you think we will need to make this little community?" "Where will we find these things?"

Developing the Concept:

Children should be taken out of doors equipped with a small spade, plastic pail, and plastic bags. Only items that will be used should be collected. The following may be collected:

1. gravel and sand
2. charcoal
3. forest soil containing humus
4. small plants including the root system masses, lichens, grasses and what other plants are available in the immediate environment.
5. an interesting rock or two.
6. a small saucer filled with water

After children have assembled the terrarium they may look for some small animals such as snails, grasshoppers, frogs, caterpillars, etc.
After materials have been collected, discuss the proper order in which materials should be placed in the terrarium and the reason for each.
Cover the container with glass or plastic cover. The terrarium should be placed out of direct sunlight. Popsickle sticks may be used to measure growth.

Extending the Concept:

Observe from day to day:

1. Growth of plants.
2. The rain in the terrarium.
3. Signs of animal activity.

Fixing the Concept:

Children may bring containers from home and make their own terrarium at school. Let children furnish their own materials as much as possible.

A TERRARIUM

Suggested Filmstrips:

1543 "Where Plants Grow" PTA Council Film Library

685 "Plants Change Through the Year" PTA Council Film Library

Environment - Grade 1
Lesson 6

Objective: Pupils will be able to list the Seven Basic resources and to explain what conservation means.

Concept: Our lives and the lives of future generations depend upon the wise use of our natural resources.

Purpose of the Lesson:

To teach the meaning of the words natural resources and conservation.

Introducing the Concept:

The following items should be on display on a demonstration table:

1. Soil
2. Water in a jar
3. A small branch of a tree
4. A piece of rock
5. A blown up balloon
6. A piece of rock
7. A picture of some wildlife or figurine
8. A picture of people or a figurine

Developing the Concept:

Have children gather around the demonstration table. Have the items identified as the children talk about the items. Tell them that all of these items are called natural resources. Write the words on the board or on an experience chart. List the names of the resources on the board also. After display items have been identified place labels on each. Develop a discussion around the importance of each of the resources.

Soil: 1. To grow plants and food.
Water: 1. To drink, to bathe in, to wash clothes
2. To play in, to fish in
3. To help plants grow
Forest: 1. To use for shade
2. To give us fruits and nuts
3. To build houses and furniture
4. Home for animals
5. To hold top soil in place
Minerals: 1. To make our food taste better (salt)
2. To write with--chalk, pencil
3. To make metal things, parts of desks, etc.

Wildlife: 1. To enjoy watching and hunting
2. To destroy harmful insects
3. For food for people

Air: 1. For all animals to breathe

People: 1. To use natural resources wisely so that there will be not only enough to go around now, but also there will be enough for the first graders to use and take care of when they get to be grown-ups.

Fixing the Concept:

Take a walk on the school grounds to find examples of our natural resources and discuss the importance of each.

Suggested Filmstrips:

613 "Finding Out About Land, Air, and Water"

Environment - Grade 1
Lesson 7

Objective: Children will be able to list rules of acceptable behavior and habits in the outdoors.

Concept: People have a civic responsibility to keep their environment clean and beautiful.

Purpose of the Lesson:

To help the children feel the need for conserving the beauty of America's outdoors.

Introducing the Concept:

The closed suitcase is placed on an observation table and the teacher asks: "What does this remind you of?" The teacher then opens the suitcase and the contents are discussed.

Developing the Concept:

The teacher suggests: "Let's plan a picnic with our families." In discussion the following conclusions might be reached:

1. What to take: Lunch, bathing suits, towels, blanket, insect repellant, bird and flower books, binoculars, litter bag, collection bags, and first aid kit.
2. How can we help get ready: Pack our own things, help pack the car, run errands, watch the baby.
3. How to have a safe trip: Place all litter in bags, lock your doors, fasten your seat belt, don't disturb the driver, keep arms and heads inside the car.
4. How to have fun: Watch for wildlife, collect interesting rocks, enjoy wild flowers, look for nests of birds. A discussion might be held on picking wildflowers and taking bird nests.
5. How to be safe: Get your parents permission to swim, follow safe swimming rules, wear a life jacket if out in a boat, be careful with camp fires, watch out for poison ivy, be careful of sunburn, pick up broken glass if you find it.

6. How to leave a picnic area: Leave it cleaner than you found it, put all cans, bottles, and paper in trash receptacles. Don't throw waste in the water, be sure the camp fire is out.

Fixing the Concept:

Over a period of several days, have pupils prepare a booklet entitled: "Going On A Picnic." The contents may include: Things to take, things to do, games to play, and rules for a safe picnic.

Materials Required:

A picnic basket or box filled with picnic objects.

People - Grade 1
Lesson 8

Objective: The pupils will be able to identify types of individuals that helped them obtain the food they had for breakfast.

Concept: Life can be easier and more enjoyable when people help each other.

Purpose of the Lesson:

To give the children the opportunity to understand that many people help us that we will have our daily food.

Introducing the Concept:

Display of pictures of food and the workers who help grow and prepare the food.

Developing the Concept:

1. What did you have for breakfast that no one outside your own home helped prepare, produce, etc.?
2. List types of people who helped produce the food you had for breakfast. (e.g., baker, milkman, farmer, truck driver, storekeeper.)
3. What would it be like if we did not have anyone to help with preparation of our food?

Extending the Concept:

1. Take a trip to a dairy, a bakery, or a farm.
2. Utilize a film on food preparation.

Fixing the Concept:

1. Draw pictures to show how a loaf of bread (cereal, etc.) got to your house.

Materials Required:

Pictures of foods used for breakfast
Pictures of work related to preparation of breakfast (e.g., farmer, chickens, milkman, baker, fruit being gathered, etc.)

Suggested Filmstrips:

62 "We Work Together"
98 "The Baker"
100 "The Grocer"
115 "The Milkman"
1676 "Where Food Comes From"
1678 "Getting Food Ready for Market"

Soil - Grade 1
Lesson 9

Objective: The students will be able to name things that make their home in the soil.

Concept: Soil provides a home for many things.

Purpose of the Lesson:

The students will understand how soil can be a beneficial home for some animals.

Introducing the Concept:

Display of animal pictures.

Developing the Concept:

1. What does the animals home look like below the ground?
2. Why do they build their home in the ground? (protection from larger animals, shelter)
3. List animals that the students have seen which have their homes in the ground.

Extending the Concept:

Have the class take a field trip to look for animal homes in the soil.

Fixing the Concept:

Put an ant colony in a glass jar and observe their activities. (A smaller sealed container can be buried in the center of the soil to concentrate their activity near the edge of the glass.

Materials Required:

Pictures of animals which make their home in the soil. (e.g. ants, beetles, worms, gophers, rabbits, snakes, badger, fox)

Water - Grade 1
Lesson 10

Objective: Students will be able to name several ways that we use water in our daily lives.

Concept: We use and need water every day of our life.

Purpose of the Lesson:

To show that each person needs water in their everyday life.

Introducing the Concept:

Have students make a list of ways in which they used water so far today. Be sure to include food, milk, personal hygiene.

Developing the Concept:

1. How would your life be different tomorrow if you had no water in your home?
2. What are indirect ways we use water? (air, cooling, recreation)
3. Can anything live without some water?

Extending the Concept:

1. What is it like to have very little water? (desert life)
2. What happens if we have too much water? (flood)
3. Is all water considered food for use in our lives? (e.g. drink from river)

Fixing the Concept:

Make or collect containers to show the average volume of water used by each person in Wausau each day. Measure the number of quarts or gallons you use when you take a bath, also amount needed to flush the toilet.

Air - Grade 1
Lesson 11

Objective: The pupils will understand that fires need air to burn.

Concept: Air is necessary for combustion to take place.

Purpose of the Lesson:

To demonstrate the necessity of air to combustion.

Introducing the Concept:

Explain to the class the need for three things before combustion can take place. (Heat-Air-Fuel) Explain that the candle is fuel, the matches are heat, and the air is all around us.

Developing the Concept:

Light the candle by applying the heat to the fuel. Explain that the candle will burn until the fuel is gone, the heat is taken away, or the air supply is cut off. Place a small glass beaker over the candle. Have the class decide why the candle went out. Place a large glass beaker over the candle. Have the class decide why the candle burned longer. Continue the process with larger beakers. A stop watch or a clock with a second hand may be utilized.

Fixing the Concept:

1. Ask why the candle went out?
2. Ask why it burned longer when larger beakers were used?
3. Develop lists of ways to extinguish fires by removing the oxygen.
4. Children draw pictures or write stories about why fire is our friend. (Again strengthen the concept that air is necessary for combustion.)
5. Have children develop a list of ways in which fire can become harmful.

Materials Required:

Candle
Assorted sizes of glass beakers
Matches

Minerals - Grade 1
Lesson 12

Objective: Pupils will be aware that salt is a mineral and that it is a necessary part of our diet.

Concept: Salt is a necessary part of our diet.

Purpose of the Lesson:

Pupils will understand that salt is a mineral that we use daily.

Introducing the Lesson:

Class and teacher will utilize reference books to find out how salt is mined and how it arrives on our tables.

Developing the Concept:

Discuss the many uses of salt. Again, reference books may be utilized for background knowledge. Have children develop lists of the many uses of salt.

Fixing the Concept:

Have the class ask their mothers to prepare them a meal without salt. Suggest that the pupils eat some of their favorite food without salt: popcorn, butter, corn on the cob, etc.

Help the class develop a list of questions about salt and then find the answers in the reference books:

1. Where is salt found?
2. Why are the oceans salty?
3. How does your body use salt?
4. Why is salt a mineral?
5. Could you live without salt?

Wildlife - Grade 1
Lesson 13

Objective: The pupils will realize there are many kinds of wildlife in Wisconsin.

Concept: There are many kinds of wildlife in Wisconsin.

Purpose of the Lesson:

To help the children discover the many types of wildlife around them.

Introducing the Concept:

Teacher begins bulletin board display with lists of birds and animals the children have seen around home and school. Pictures should be used when available. A calendar may be developed using pictures of birds and animals and giving the dates on which they were seen.

Developing the Concept:

Pupils will attach names to the birds and animals on the bulletin board. Children should identify animals and birds by their correct names. (White-tail Deer--English Sparrow--Redheaded Woodpecker--Ruffed Grouse--etc.) Talk about kinds of home, habits and food of familiar birds and animals. There might be nests to observe.

Extending the Concept:

Many kinds of bird feeders may be made by the pupils. A large pine cone or wire basket filled with suet, peanut butter, and seeds may be hung on a tree that can be seen from a window. This is a simple feeder for small children to make. Emphasize that feeding when once begun must be continued until food in nature is available.

Fixing the Concept:

Take a "walking" field trip in the area of the school and watch for wildlife. Have the children look for wildlife tracks in soft soil or the snow. Make scrapbooks of pictures including only Wisconsin wildlife. Have the children write stories about their favorite wildlife creatures.

Suggested Filmstrips:

601 "Woodland Neighbors"
602 "Woodland Friends"
1910 "Classification of Different Animals"

Suggested Films:

Birds of our Story Books
Common Animals of the Woods

Observation - Grade 2
Lesson 1

Objective: Children will develop an awareness for their environment through the use of their senses.

Concept: We learn about our environment through the use of our senses.

Purpose of the Lesson:

To make children aware of their environment through the use of their senses.

Introducing the Concept:

Review with the children the importance of our senses and how we use them to find out about our environment. Teach the meaning of a square yard. Take the children outdoors for the remaining activities.

Developing the Concept:

When out on the playground, scatter the pupils at random and have them measure off a square yard. Each child then stands in the middle of his square yard and looks and listens. They are told to see how many things they can discover, how many sounds they can hear, and how many things they can smell. The children are to look for birds, look for flying insects, and investigate their little patch of ground for crawling insects, worms, rocks, etc. They may use their plastic bags in which to place any "treasures" which they discover or uncover. Allow about fifteen minutes for this activity. The children are then given an opportunity to show and tell what they have found.

Fixing the Concept:

Have the children write and illustrate a story of their "Little Patch of Ground."

Materials Required:

Plastic bags, rulers, and four sticks each for marking corners.

Observation - Grade 2
Lesson 2

Objective: Children will develop an awareness for their environment through the use of their senses.

Concept: People take their environment for granted.

Purpose of the Lesson:

To become more aware of our environment through the use of our senses.

Introducing the Concept:

Have the pupils seated in a circle on the floor. Review the concept of how important our eyes are as a tool for learning about our environment. Develop the importance of the total use of our senses.

Developing the Concept:

After the above discussion has been terminated, then tell the children that today we are going to play a game to see how well we can use our senses. Have the children close their eyes and pass the paired objects around. Tell them they may use any or all of their senses to help determine what the objects are. After each paired object has passed, then have the two objects identified. Ask: What senses did you use? Were some senses more helpful than others?
When the two pieces of wood are passed and identified, then have the children use their sense of hearing to determine the size. Do this by dropping the objects from the same height. The larger piece will make a louder sound. Objects may be dropped by their end or side. See if students can determine how they are dropped by the sound they make.

Extending the Concept:

Discuss with the pupils the importance of the other senses to a person who is blind.
Ask the students if they can group the objects by their likenesses or differences.

Materials Required: Paired objects: an onion and an orange, a paper cup with ground, the other with sand; needles from an evergreen and a twig with broad leaves; a paper cup with salt and the other with sugar; two pieces of wood of different size and shape. Any other objects that will follow the same pattern as those listed.

Social Behavior - Grade 2
Lesson 3

Objective: Children will understand what it means to be a conservationist.

Concept: People who care for and use resources wisely are conservationists.

Purpose of the Lesson:

To teach the basic meaning of conservation.

Introducing the Concept:

Bring a copy of a daily newspaper to school and as an introduction to this lesson ask the children the following questions to stimulate discussion:

1. What is this?
2. What is it for?
3. What information do we get from it?
4. What do you do with it after it is read?
5. What are some uses for old newspapers at home?
6. What do we use old newspapers for in school?

Developing the Concept:

1. Make a list of things in school that are made from paper. Explain to the class that paper is made from one of our natural resources. Ask: Can you guess which one? Discuss how paper is made. Information and charts may be obtained from the paper company. When we use paper wisely we are using one of our natural resources wisely. This is called conservation. People who use things wisely are called conservationists.
2. Further discussion may be developed around the wise use of our other resources in a way that is meaningful to the child such as:

   A. Be careful not to waste water at the drinking fountain or in the bathroom.
   B. Use only one paper towel.
   C. Take care of books.
   D. Do not waste writing paper.
   E. Walk on sidewalks.
   F. Do not waste food.

Fixing the Concept:

Give each child a white round cardboard disc about 3 inches in diameter. Have them write in large letters "I am a Conservationist!" They may wish to put decorations around the outside edge. Tape a safety pin on the back to enable the child to wear his badge proudly.

Extending the Concept:

Invite someone from one of the paper companies to talk to the group on how paper is made. If possible, arrange a field trip to a packaging corporation. Make a bulletin board on all the different things paper is used for.

Audio-Visual Materials:

Suggested filmstrip: "What is Conservation?" 667

Social Behavior - Grade 2
Lesson 4

Objective: Pupils will be able to make a comparison between the forest community and the community in which they live.

Concept: Living things live in communities.

Purpose of the Lesson:

Pupils will develop an understanding of the similarity between social communities and natural communities.

Introducing the Concept:

Have the class make a list of all the advantages of living in a social community. Explain that trees, plants, and wildlife also live in a community--a natural community.

Developing the Concept:

Use the blackboard or flannel board to demonstrate how one tree can help the plants and wildlife around it.

1. Provides shade for other plants.
2. Provides support for other plants.
3. Home for many different animals.
4. Food for animals.
5. Holds soil and water.
6. Acts as a wind break for smaller plants.

Explain that in the forest great numbers of trees are doing all these things.

Fixing the Concept:

Help the class develop lists of the advantages gained by having plants grow in communities.

Audio-Visual Materials:

131 Living Together in Your Community
634 Animals, Plants and Their Environment

Social Behavior - Grade 2
Lesson 5

Objective: Pupils will develop an appreciation and a sense of value relating to their environment.

Concept: The natural beauty of our environment is often marred by careless acts of people.

Purpose of the Lesson:

To develop a sense of respect toward our natural environment.

Introducing the Concept:

Discuss with the students ways in which people have carelessly destroyed the natural beauty of their environment.

1. Litter along streets and roads.
2. Writing on the school building.
3. Walking across the grass.
4. Breaking limbs off trees and shrubs or carving on trees.

Developing the Concept:

Take a walk around the school grounds observing signs of the misuse or careless use of our environment. After completing this walk, return to the classroom and plan with the pupils an activity to help improve their environment. This activity may be conducted indoors as well.

Fixing the Concept:

Suggested Activities:

1. Pick up litter on the playground, along the street, or along a roadside.
2. Repair a lawn area that has been destroyed by people walking across it.
3. Clean off areas where students have written on the walls, etc.
4. Plant a tree or shrub to help beautify the school grounds.

Extending the Concept:

Invite someone from the Park Department or Street Department in to talk about the costliness of vandalism and littering.

Environment - Grade 2
Lesson 6

Objective: The students will develop an appreciation for interdependency of all human beings.

Concept: The pupils will be able to list areas where cooperation is necessary to maintain community life.

Purpose of the Lesson:

To show the interdependency of human beings in a community.

Introducing the Concept:

Ask:
1. Can we live in this community without any help from other people?
2. What is in this room that requires cooperation from other people? (e.g. water, lights, furniture, building itself)

Developing the Concept:

Ask:
1. Whose help is needed so we can turn on the lights? (Wisconsin Public Service Corp., river flow, electricians, etc.)
2. Whose help is needed when we dump water down the drain? Have snow on the streets, telephone, radio, TV?
3. What food did you have at the last meal that required no help to obtain?

Extending the Concept:

1. Each job is important.
2. What would it be like if we had no garbage collection?
3. What would it be like if we had no roads plowed out in winter?
4. What would it be like if we had no sewers?

Fixing the Concept:

What can we do to help cooperate in our community?
1. Help pick up waste paper, etc., in our room, school halls, playground and put it in proper containers.
2. Keep litter off streets and walks.

3. Use only what we need, extra water down the drain makes extra work for someone.
4. Be ready to help others, they are helping you.

Audio-Visual Materials:

Select from Series on:
City Community
Home Community
Community Helpers
City Living

1508 Working Together in a Neighborhood
1509 How Goods Come to Us

Environment - Grade 2
Lesson 7

Objective: The pupils will develop an awareness of how plants and animals are interdependent.

Concept: The pupils will be able to identify areas where plants and animals are interdependent.

Purpose of the Lesson:

To show the interdependency of plants and animals in a forest community.

Introducing the Concept:

Have pictures of several forest animals and photos of a forest, open field or burned areas.
Ask: 1. Can a squirrel live without trees?
2. Can a fish live without water?
3. Can a deer live without woods?

Developing the Concept:

1. Discuss that a squirrel is dependent on trees for food and shelter. New trees get planted when a squirrel forgets where he buried acorns. Trees are dependent on squirrels to plant seeds.
2. Forest provides deer with food and shelter.
3. Squirrel plants seed for tree along bank of lake, deer eats twigs from small tree, hides in brush from danger, bugs fall from tree into water to make food for fish, tree is nesting place for birds.

NOTE: This can be displayed very easily with flannel board if available.

Extending the Concept:

Field trip to Fern Island or other suitable area.

Fixing the Concept:

What can you do to help the forest community?
1. litter
2. camp fires
3. cutting trees needlessly
4. disturbing animal homes

Materials Required:

Pictures of forest animals
Pictures of forest, open fields, burned area
Pictures of fish and lake, squirrel and tree, deer and forest, etc.

Audio-Visual Materials:

Filmstrip: 583 Animals Get Ready for Winter

Films: Beavers at Work 10 min. color

People - Grade 2
Lesson 8

Objective: The pupils will be aware that man is constantly changing his environment.

Concept: Environment is always changing.

Purpose of the Lesson:

To help pupils understand their environment and man's role in the constant change.

Introducing the Concept:

The teacher leads the discussion of what the environment was like for the American Indian before the white man settled in Wisconsin. Explain the Indian's need for a natural environment and the relative little change caused by their activities. You might point out that the Indian burned some of the forest to create grazing places for wildlife and a suitable place for growing wild fruit.

Developing the Concept:

Pupils will help the teacher develop lists of changes in the environment that were brought about by the white men from the virgin forest to the present.

Fixing the Concept:

Class may write stories about the changes which have taken place since the white man first settled here. Lists of changes taking place right now in our community may be developed.

Pupils may develop lists of changes that need to be made at the present time in our environment.

Encourage the class to give examples of changes in their environment (new or remodeled homes, new schools, pupil works, industrial expansion, etc.)

Lead a discussion on why it is necessary to constantly change man's environment.

Audio-Visual Materials:

1505-1506 My Neighborhood
1606-1609 Our Community

Soils - Grade 2
Lesson 9

Objective: Children will define what is soil and explain how important it is to lives.

Concept: Soil is the top layer of earth which gives us food.

Purpose of the Lesson:

To enable pupils to become aware of what soil is, of the variety of soils, and the importance of soil to living things.

Introducing the Concept:

A bag of soil which is concealed from the class is brought before the class. The teacher holding up the bag tells the class that she has a riddle for the group. She gives the following clues:
In this bag I have something that:
1. Came from the school yard.
2. Is a home for animals.
3. Can not move by itself, but is often moved by wind, water, and even people's feet.
4. Is a place where plants live.
5. We could not live without it.

After getting the correct response, pour the bag of soil on a large sheet of white paper. Let the children examine it. Encourage them to use as many of their senses as they need to.

Developing the Concept:

Develop a discussion around the following points:
1. What is soil?
2. What is the difference between soil and dirt? (Dirt is what you wash off your face and hands.)
3. Where does soil come from?
4. What is soil used for?
5. Are there places where no soil is found?

After completing the above discussion, take the group outdoors and collect samples of different kinds of soil. The samples then can be examined under a magnifying glass, felt, and smelled.
1. Look at each kind of soil. How are they alike? How are they different?
2. Look for tiny plants.
3. Look for tiny animals.
4. Examine the soil samples under a microscope.

Fixing the Concept:

Have children make illustration showing the different uses of soil. Seeds may be planted in each soil sample to see how well plants grow in each. After a period of time comparisons can be made and conclusions drawn as to why some soil grows better plants than others.

Audio-Visual Materials:

1925 Soil for Plants

Water - Grade 2
Lesson 10

Objective: Pupils will understand that all life must have water.

Concept: All life must have water.

Purpose of the Lesson:

To teach the pupils that clean water is necessary for our daily life.

Introducing the Lesson:

Explain the source of clean water, rain, snow, sleet, hail. Discuss how precipitation falls to the ground, soaks into the soil, runs off, or evaporates to form clouds.

Developing the Concept:

Slice tops from two carrots. Place one in a glass with water. Watch the green top grow. Place the other carrot in a container without water as a control. Compare the two. Do the same with a sweet potato and an acorn. Explain that all plants--all life, needs water to exist.

Have the class develop lists of how they use water daily. Cleanliness, cooking, drinking, recreation, etc.
Place a container beneath a leaky water faucet. Leave the container there until filled. Discuss how much water can be wasted in this manner. Point out the importance of conserving water.

Fixing the Concept:

Have the children list foods they ate for one day's meals and tell the use of water in preparing the foods and in producing them. Have children tell ways they can enjoy water: Snowmobiling, skating, boating, camping near water, drinking, fishing, bathing. Have children bring in pictures showing Wisconsin water scenes.

Audio-Visual Materials:

678 How a Plant Grows
1904 What Makes a Plant Grow

Air - Grade 2
Lesson 11

Objective: Pupils will understand that plants need air and light to live.

Concept: Plants need air and light.

Purpose of the Lesson:

Class will understand the importance of air and light to plant growth.

Introducing the Concept:

Teacher begins the lesson by planting several seeds of different variety in clay pots. Two plants of each variety should be planted. Teacher then explains that plants need soil, light, water, air, and a desirable temperature to grow.

Developing the Concept:

After the plants have grown to desirable height, one of each of the plants is covered with a container that will shut out light and air. After several days the covered plants can be compared to the uncovered plants. Students will draw conclusions with the teacher's help. Experiments may be varied so that plants may be revived if not kept covered too long.

Fixing the Concept:

Students write stories about what has happened to the uncovered plants. The class can describe the differences in the appearance of the covered plants as compared to the uncovered.

A hole may be cut in one of the covers and the pupils then can see how a plant will grow towards light. The leaves of the uncovered plants will also face the source of light if not moved periodically. Teacher may want to explain that trees in the forest grow tall and straight in their search for light.

Audio-Visual Materials:

Filmstrips: 1544 What do Green Plants Need for Growth

Films: How Air Helps Us 11 min. B & W

Minerals - Grade 2
Lesson 12

Objective: Pupils will become aware of the importance of minerals in our society.

Concept: Minerals are useful to man.

Purpose of the Lesson:

To help the children understand the importance of minerals.

Introducing the Concept:

Prepare demonstration table with articles made from minerals. Ask:
1. What do these articles represent?
2. Where do minerals come from?

Have the class find other articles in the room made from minerals.

Developing the Concept:

Have the class sort the objects:

Metallic	Non-Metallic	Fuel
coins	chalk	coal
gold ring	salt	lighter fluid
knife and fork		

Explain that fuels are not true minerals because they come from things that were once alive. Continue to explain that man is using more and more minerals every day. Explain that minerals are a non-renewable resource in that once used up they cannot be grown again. Therefore it is important that we use our resources wisely.

Fixing the Concept:

Plan a walk around the school and playground to observe how minerals are used. Pupils may bring items made from minerals from home to be placed on the demonstration table.

Ask the pupils to write stories with the titles:
Minerals Are Important to People
People Should Use Minerals Wisely

Audio-Visual Materials:

Filmstrips 659 Rocks and Minerals

Materials Required:

Articles made from minerals
(coins, coal, chalk, salt, lighter fluid, gold ring, knife, fork, etc.)

Wildlife - Grade 2
Lesson 13

Objective: Pupils will know that animals use materials from their environment for their needs.

Concept: Animals use materials that are available to them.

Purpose of the Lesson:

To develop the understanding that animals make their homes from many kinds of materials found in their environment.

Introducing the Lesson:

Place a bird nest where the children can observe it. Ask:
What made this home?
Where do you think it was found?
What materials were used?
Where did the materials come from?

Developing the Concept:

Ask:
1. What animals build nests?
2. What kind of homes do beavers build?
3. Where do they build them?
4. What materials do they use?
5. What kind of homes does a farmer provide?
6. What materials does he use?
7. What kind of home do you provide for pets?
8. Where do you get the materials?
9. What animals nest in holes in trees?
10. What kind of animals build their homes in the ground?
11. What kind of animals build their homes in rocks?

Fixing the Concept:

Take a walk with the class and look for animal homes. Have the class draw pictures of animal homes they have seen. Decide if the animal made the home or if man made it for him. Determine what kind of materials were used. Where did the materials come from? Make a bulletin board with the pictures.

Audio-Visual Materials:

Filmstrips:

1908 Why Animals Need Food, Heat, and Air
682 Animals Have Homes
634 Animals, Plants and Their Environment

Films: Bird Homes
Adventures of a Baby Fox 13 min. B&W

Forests - Grade 2
Lesson 14

Objective: Pupils will be able to identify the three main parts of a tree.

Concept: Trees have three main parts.

Purpose of the Lesson:

The children will develop a knowledge of the three main parts of a tree.

Introducing the Lesson:

Have a picture mounted on the bulletin board displaying a mature hardwood tree in a summer or fall setting.

Developing the Lesson:

Discuss with the class the three main parts of a tree.

The crown: The crown is the top part of the tree and consists of leaves and branches. It provides shade, nesting places for birds and animals, food and protection. After a tree is harvested, the wood in the crown can be used for pulpwood and firewood.

Trunk: The trunk makes the tree strong and straight. It is used for lumber. The sap of some trees is used. Sugar maple and rubber trees are examples.

Roots: The roots hold the tree firmly in the ground and get water and nutrients from the soil.

Fixing the Concept:

Have the class draw pictures of trees and identify the three main parts of the tree.

Audio-Visual Materials:

Transparency

Parts of a Plant

Observation - Grade 3
Lesson 1

Objective: Pupils will become more aware of their environment through the use of their sense of touch.

Concept: People can learn about their environment through their sense of touch.

Purpose: To make pupils aware of their environment through their sense of touch.

Introducing the Concept:

Have a collection of things from the outdoors, such as: a piece of rock, some ground in a paper cup, branch of a broadleaf tree, clump of grass, a weed with its root system, piece of bark, an old bird's nest, etc. Keep the collection invisible from the class. Seat pupils on the floor in a circle.

Developing the Concept:

Tell the students that today we are going to play a game to see how well we can observe with our hands. Instruct the pupils to pass each item around the circle. When the object has reached the last person, take the object and put it out of sight. Students then are to determine what the object was by feeling it only. Students should then write down what they thought the object was. Continue with each object following the same procedure. After all objects have been passed, then the students may check their responses.

Fixing the Concept:

Have the students group the objects according to living or non-living things.

Observation - Grade 3
Lesson 2

Objective: Pupils will become more aware of their environment through the sense of hearing.

Concept: We can learn about our environment by carefully listening.

Purpose of the Lesson:

To become aware of our environment through the sense of hearing.

Introducing the Concept:

Review the importance of our senses in learning about our environment. Tell the students that today we are going to play a game to see how well we can use our ears.

Developing the Concept:

Play the pre-recorded tape. Have the students listen and record on a piece of paper the sounds that they hear. After completing the tape, replay the tape for the second time in order that students may check their responses. Replay each sound and then have the correct response given.

Extending the Concept:

Discuss how important sounds are to man who has lost his sight. Emphasize that to him, there is no night and day.

Have the pupils group the sounds under two headings: Those that are man-made and those that are sounds of our natural environment.

Fixing the Concept:

Have the pupils prepare two lists, one entitled "Pleasant Sounds I Hear" and the other "Unpleasant Sounds That I Hear".

Materials Required:

This leason requires a pre-recorded tape that can easily be made with a portable tape recorder. The content of the tape may be varied but might

contain some of the suggested sounds: a bird singing, frogs croaking, running water, wind in the trees, a car going by, a train whistle, insects such as crickets, etc.

Audio-Visual Materials:

Suggested film: "How Sound Helps Us" 11 min. color.

Social Behavior - Grade 3
Lesson 3

Objective: The students will be able to name three wild flowers.

Concept: Respect for the out-of-doors increases when its beauty is recognized.

Purpose of the Lesson:

To enable the student to identify a few wild flowers and understand his responsibility to preserve our natural environment.

Introducing the Concept:

Use slides or photos to show some of the wild flowers that can be found in this area. Discuss with students:

1. What is a wild flower? (any plants that grow without the aid of cultivation)
2. Where do they live? (swamp, sand, woods, fields)
3. When do they bloom? (most of them in the spring, some in summer and fall)
4. Why should we leave them? (hard to transplant for if new area does not have the same conditions--amount of sun, type of woil, amount of water, etc.--the plant will die, flowers will wilt when picked, will not last like garden flowers; if flowers are picked there will be no seeds for next year's flowers to grow from)

Developing the Concept:

Have several pictures (colored preferred) of five or six common wild flowers, preferrably different views of the same flowers; e.g. trillium, yellow violets, purple violets, lady slipper, wild rose, spring beauty, wild phlox, jack-in-the-pulpit, etc.) Place a large label of the flowers' common name on the floor or table and have the students sort the pictures so all pictures of one flower are together.

If possible, conduct a field trip to an area where wild flowers may be observed. This will necessitate scouting the area in advance of the trip.

Extending the Concept:

If hand lens are available on a field trip you may wish to examine one flower in detail showing that it is composed of several parts. Check for such things as presence or absence of hairs, shape of the leaves, edges--smooth or toothed, number of stamens, petals, sepals, etc.

Within the classroom discussion could be held on questions such as:

1. What are two great enemies of wild flowers? (Fire--destroys plant and burns up food in soil (humus) needed by the flower and people who pick the flowers)
2. What good are wild flowers? (beauty, many help hold the soil in place, moss serves as a sponge to hold water)
3. What is the wild flower emblem for the state of Wisconsin? (violet)
4. Do other states have wild flower emblems of flowers that you know?

Audio-Visual Materials:

Filmstrips: 1649 Plants in Spring

Study Prints: Spring Wild Flowers

Films: Spring is an Adventure 11 min. Colored

Social Behavior - Grade 3
Lesson 4

Objective: The pupils will realize that all land belongs to someone.

Concept: All land is owned by someone or some party.

Purpose of the Lesson:

To help the children become aware that land has ownership.

Introducing the Concept:

Explain the ownership of land and how land is acquired. Pupils may give examples of land their parents own such as a city lot or farms and land that relatives own. Explain the concept of public property such as parks, schools, campgrounds, etc. Help pupils understand that all people own public lands.

Development of the Concept:

Explain that the trees and plants on the land belong to the landowner. However, the wild animals and water on the land belong to everyone, but are controlled by the government. The government controls the wild animals and water so that there will always be wild animals and water for everyone to enjoy. The government controls the wild animals and water by setting up hunting and fishing seasons, licensing sportsmen, and making laws to control the correct use of water.

Before entering private land a person should get permission from the landowner, when possible. If the land has no signs which say "NO TRESPASSING", the land should not be entered at all. While on another person's property, no trees or plants should be disturbed and domestic animals should not be bothered.

On public property the trees and plants should again not be disturbed. While the plants and trees belong to all of us they do not belong to any one person. Hunting and fishing regulations should be strictly adhered to so that our wildlife is used wisely.

More private land is being closed to the public each year because of damage done to the property by careless outsiders.

Fixing the Concept: Have the class cite examples of private and public property. Have them make up some good rules of conduct to follow whether on public or private lands.

Environment - Grade 3
Lesson 5

Objective: Students will be able to identify ways man has upset his environment.

Concept: Humans frequently change the environment by their actions.

Purpose of the Lesson:

To have students realize man's actions have an effect on his surroundings.

Introducing the Concept:

Show pictures or other graphic examples of man's activities that have changed the environment. Ask: What do you think this area was like before people ever lived here? How has it changed? Are we doing anything now to make it change even more?

Developing the Concept:

Make cards that name (one thing on each card) things which man does that will change his environment. Get as many as the class can think of (e.g. sewage dumped into the river, smells from some industry, fire, cows in the woods, build roads and cities where it once was forest, erosion of fields, etc.) When this is completed, sort the cards under headings of animals, plants, soil, water, minerals, to show which action affects which resource. (In most cases students will see that man's action affects nearly all resources--additional cards should be made as they are needed.)

Extending the Concept:

(Care should be taken to point out that many things which harm natural environment also help us in other ways, e.g. paper mill dumps waste in river but provides jobs for many people so they can feed and clothe their children, pay taxes toward our school and community. Our goal should be to make these things even more helpful.)

What can we do as an individual that might change our environment? (forest fire, litter, plant trees, food shrubs for wildlife, proper voting when we are older)

Materials Required: Pictures: Pollution
Forest fires
Open pit mines
Littered grounds
Large smoke stacks

Environment - Grade 3
Lesson 6

Objective: Pupils will be able to identify things in our environment which can be appreciated for their beauty.

Concept: There are many beautiful things around us to see and hear.

Purpose of the Lesson:

Some things are to be enjoyed for their beauty and it is not their purpose to earn a profit for man.

Introducing the Concept:

(Day preceding field trip) Take a few minutes to think about some things around us that make the world beautiful. When we think of individual things such as grass, trees, lakes, soil, animals, etc., we think of natural resources. When we put them together we think of our environment. You may wish to read the poem by William Blake.

NIGHT

The sun descending in the west,
The evening star does shine;
The birds are silent in their nest,
And I must seek for mine.
The moon, like a flower,
In heaven's high bower,
With silent delight
Sits and smiles on the night.

Farewell, green fields and happy groves,
Where blocks have took delight.
Where lambs have nibbled, silent moves,
The feet of angels bright;
Unseen their pour blessing,
And joy without ceasing,
On each bud and blossom,
And each sleeping bosom.

You may wish to play all or parts of recordings such as "Morning", "Forest Murmurs", "Trees", etc. Use the quote from Stevenson's "A Child's Garden of Verses". "The world is so full of a number of things, I'm sure we should all be as happy as kings." Have children each write the letters of the alphabet in a row and then think of the name of a plant or animals (be sure to include birds, fish, reptiles, etc.) that starts with each letter.

Developing the Concept:

(field trip) A field trip to the John Muir Forest is suggested. Another is fine but please refer to the trip sequence at the beginning of this guide to avoid duplication. The main purpose of the trip is to have children become aware of the beauty in commonplace trees, flowers, forests, pastures, lakes, etc. While on the trip, students will frequently sit down to look, listen, smell and feel things around them. Get them to discuss how they feel about the bird's song, wind in the treetops, frog croaking, colorful petals on the flower, etc. If it is available you may wish to take magnifying glasses and binoculars for student use.

Extending the Concept:

(Day following field trip) List all the beautiful things you saw and heard on the field trip on cards. Sort these cards into areas of animals, plants, soil, water, minerals. Ask why these things are important to us? Why we should take care of our natural resources? Are they really important if we don't need them to make our living? (Why is a forest important to a plumber?)

Discuss the value of beauty and get their ideas concerning responsibility of man toward his environment. Encourage creative art from ideas or experiences gained on the field trip.

People - Grade 3
Lesson 7

Objective: Students will be able to list parts of our bodies that could be lost which would then change that person's environment.

Concept: Our eyes, ears, and nose help us enjoy our environment.

Purpose of the Lesson:

Have students realize the vital importance of our senses in our lives.

Introducing the Concept:

Ask:

1. What is your favorite food? Would you have a favorite food if you could not taste or smell anything?
2. Do you have a favorite color? What would life be like if it were always night? (It is always night for a blind person)
3. Did you ever watch TV without the sound? (The way life is to a deaf person)

Developing the Concept:

1. Have students close their eyes and then do several common things in the room. Can they tell you what you did.
2. Pick several articles (hid from class) and have a student come up to view one object--he is to describe it to the class and they have to name it from his description.
3. Student close eyes--feed them common food--name it from sense of taste or smell.
4. When blindfolded, name article by sense of touch.

Extending the Concept:

1. How would your life be changed if you were blind tomorrow? Deaf? Lost an arm or hands?
2. How does a deaf person get along in life?
3. How does a blind person get along in life?

Fixing the Concept:

1. What can we do to save our eyes? Be careful with sharp items such as scissors, knife, sticks.
2. What can we do to save our ears? Don't put anything in your ear smaller than your elbow.
3. What can we do to save our hands? Keep away from machinery, moving gears. Our bodies cannot restore eyes, ears, fingers, etc.

Soil - Grade 3
Lesson 8

Objective: Pupils will be able to explain what erosion means.

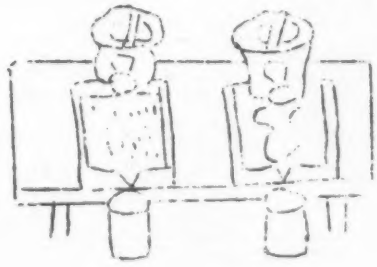
Concept: Water is a major cause of soil erosion.

Purpose of the Lesson:

To impress upon students the harmful effect water can have on valuable topsoil.

Introducing the Concept:

Pour water over a piece of sod and some over a piece of bare ground of similar size. Catch the runoff water in glass jars. Note the amount of soil that is carried with the water.



Developing the Concept:

Ask: What did you notice about the water that ran off the grassy area? How does this compare with the water that ran off the bare ground? When water carried valuable soil away we call this erosion.

Why was there less erosion on the grassy area? (Examine the grassy root system, noting how they hold the soil.)

Ask: What happens when a farmer plows his hillside up and down? How could he still farm a hillside and yet not lose his topsoil by erosion? (Explain strip-cropping and terracing.)

Ask: What other crops or plants help to hold the soil in place? Explain the importance of shrubs and trees.

Extending the Concept:

Can you think of other ways in which soil could be eroded from the land? (wind)

Fixing the Concept:

Show filmstrip on erosion. Have the students make a comparative illustration showing the wise use of our soil and the unwise use of our soil. Find pictures that illustrate damage done by eroding waters.

Materials Required:

Jar of water
Piece of sod
Piece of bare ground
2 glass jars to collect water

Audio-Visual Materials:

Filmstrip No. 668 "Saving our Soil"

Soil - Grade 3
Lesson 9

Objective: The student will be able to identify soil erosion due to water or wind.

Concept: Wind and water can take away our soil.

Purpose of Lesson:

To have the student become aware of soil erosion and basic methods to prevent it.

Introducing the Concept:

Turn on an electric fan and ask:

1. What do you feel? (wind)
2. What is wind? (moving air)
3. What can wind do? (blow seeds, leaves, soil, boats, kites, dry clothes)
4. Have you ever seen soil blowing?
5. Can water move soil? (If water is moving, not if it is still)

Developing the Concept:

Following a rainstorm go outside and observe where water has washed soil, leaves, debris, etc. Show how plant roots hold soil in place; plant leaves break the fall of raindrops so they gently let the water down to earth. This can be demonstrated in class with eye dropper and any flat surface by letting one drop fall (notice how it splashed and spreads out like a small bomb) and let one drop down easily without any fall. If possible have a thin layer of soil and let drop fall into the soil to show splashing effect of raindrops.

Have fan blow soil from flat surface, "plant" a windbreak between fan and soil (use books, cardboard, flowers, etc.). Then turn on fan to show the difference. Experiment with this a little in advance so you have the correct spacing for the size fan you use.

Extending the Concept:

Go on a field trip to observe soil erosion. This may be to a farm with contour strips or to the schoolyard to observe the holding action of the grass and trees.

An excellent classroom display is setting up two slanting pans, one with sod and one with bare soil, pour equal amounts of water into each, compare amount of water and soil that flows out of the pans at the bottom. If the collection containers at the bottom are glass this shows up very well. Time should be allowed for soil particles to settle out in the jars before conclusions are drawn.

Materials Required:

Electric fan
sod and bare soil
2 shallow pans
water
2 collection jars

Air - Grade 3
Lesson 10

Objective: The pupils will realize that Wausau also has a problem of air pollution.

Concept: Individuals living within Wausau must interact with the special environment of our location.

Purpose of Lesson:

To help children develop an awareness of the ever-present problem of air pollution.

Introducing the Concept:

Have children listen to this riddle:

I seem like nothing but I have weight.
I have no color, no smell, no taste.
You can feel me, You can push me,
Without me you would live in a silent world.
I am necessary; I am dangerous:
You control me--I control you,
I follow you; you follow me.
What am I? (air)

Ask: Did you ever hear anyone say: "I am going for a drive in the clean country air?"
Did you ever hear anyone say: "I live out in the country where the air is pure."
What do they mean? Is the country air always clean and pure?
Make a list of reasons why you have "dirty" city air.

Developing the Concept:

Does anyone have another word for "dirty" air? (If children do not say pollution, tell them). Show a dirty furnace filter to illustrate the dust and foreign particles found in household air. Ask class for other examples. What causes air pollution?

Extending The Concept:

Invite the local sanitation department to talk on some of the major causes of air pollution in Wausau and what can be done to eliminate the problem. After his talk, make a list of duties and responsibilities that each person has to help lessen atmospheric contamination.

Fixing the Concept:

Make a bulletin board of clippings, drawings and pictures dealing with air pollution. What can the schools do to clean up the dirty air? How can you help?

Audio-Visual Materials:

Filmstrip: No. 775 "Importance of Air in Nature"

Air - Grade 3
Lesson 11

Objective: The pupils will realize man's influence on his environment by polluting the air.

Concept: To make children aware of air pollution and its effect on our environment.

Purpose of the Lesson:

To make children aware of air pollution.

Introducing the Concept:

Ask: Why do plants and animals need air? (Show a picture of a fish or use the aquarium in your room if you have one to explain that fish need air also. They get the oxygen from the water.)

Ask: How do fish breathe? What happens to fish when water becomes polluted and all the oxygen is used up by dirt and trash? (Explain: Animals have been using oxygen from the air for millions of years.)

Ask: Why hasn't oxygen been used up? (Explain: People give off carbon dioxide when we breathe, all animals do. Green plants need carbon dioxide for making food and in return give off oxygen.)

Developing the Concept:

Have the children involved with the following investigations in class:

1. Air contains oxygen: Stuff steel wool in a baby bottle, fill half full of water, shake until steel wool is soaked. Pour off water. Get a soup plate and add one inch of water. Invert the bottle and let stand for a day and night. Water will rise up in the bottle and the steel wool will rust. Explain that the steel wool combined with the air inside the bottle to form rust. The water then rises to take the place of oxygen.

2. Air contains carbon dioxide: Place lime water into two clear shallow dishes. Take a straw and blow into the lime water of one dish. The lime water will become milky. Let the second dish stand exposed to the air. In time it will also turn milky from the carbon dioxide in the air.

3. Water Vapor: Get a tin can with the top and label removed. Place cold water in the can and add ice cubes to the water. Soon water droplets will form on the outside of the can. When warm air meets the cold sides of the can, water vapor in the air changes back into droplets of water.

4. Air Contains Dust: Darken the classroom and turn on a projector or strong flashlight beam. Little particles of dust will be dancing in the light. This may also be observed in a ray of sunlight.

5. Air contains smoke and soot: Place a white sheet of paper in a flat cake pan. Place the pan outdoors for a day or two. Note the collection of pollution.

Extending the Concept:

When air has lots of smoke, soot and gases in it we say that the air is being polluted. When the air is thick with gases, smoke, and fog, we call this smog. List ways in which air is polluted in your city:

1. Smoke from factories
2. Bus, trucks, automobiles, airplanes
3. Burning of garbage
4. Burning leaves

Fixing the Concept:

If possible, take students outdoors to see evidence of air pollution. Slides are available from the Outdoor Education Center on pollution in our city.

Water - Grade 3
Lesson 12

Objective: The students will realize the need for elimination of water pollution.

Concept: The student will be able to list activities that man does which affect our water resources.

Purpose of the Lesson:

To show that clean water is important in our lives.

Introducing the Concept:

Prior to the start of class have two glass jars filled with water, put sweepings from floor and a little oil or grease (obtain from janitor) in one jar and stir it up.

Hold the clear jar up to class and ask them to identify it. Repeat with dirty jar of water. Ask: Which water would you like to drink? Introduce the word pollution (have label or sign ready) "Pollution" and "Clean Water" and let one student place it before proper container. Explain that water is polluted when there are things in it that we don't want or that don't belong there.

Developing the Concept:

A clean pipe cleaner can be inserted into each container by a student and compare the appearances when they are removed. Have students smell of both containers. What kind of water would you like to swim in? If you were a fish, which water would you like to live in? If you were a lily, which water would you like to grow in? Explain that there are tiny pieces of air floating around in the water and this air is needed by plants and fish. Grease and oil use up this air so plants and fish will die if there is too much pollution. Obtain pictures of polluted water vs. clean water and have students sort and label the pictures.

Extending the Concept:

Take a field trip to the Wisconsin River to look for pollution of water.
Take a glass jar full back to the classroom and watch the pollution settle to the bottom of the jar. Compare this to a clean stream or farm pond. If a field trip can't be arranged to both just obtain water samples from both for class demonstrations.

Ask: Does litter along the streets and highways pollute our streams? How does this litter get to the river? lake? stream? (Rain carries materials to river, etc., directly or through storm sewers). Refer to demonstration in lesson on soils to show how water carries material into the streams. You may wish to repeat this demonstration.

Fixing the Concept:

1. What do we sometimes do that can cause pollution? (throw thrash in street, picnic litter not picked up, garbage tossed into stream). Choose items that the student could be directly involved in rather than city sewage or industrial wastes.
2. Have students bring pictures of people using clean water or of pollution--class should sort and label them for bulletin board.

Materials Required:

2 glass jars full of water
floor sweepings and grease or oil
clean pipe cleaners

Water - Grade 3
Lesson 13

Objective: The pupils will realize the need for water in our every day lives.

Concept: Human needs and desires are greater than the resources available to meet these needs.

Purpose of the Lesson:

To help pupils understand that all living things need water in order to live.

Introducing the Concept:

Ask: Why do you like rain? How is rain helpful? Read the following poem:

April Rain

It is not raining rain on me,
  It's raining daffodils;
In every dimpled drop I see
  Wild flowers on the hills.
A health unto the happy!
  A fig for him who frets!
It is not raining rain to me,
  It's raining violets.

....Robert Loveman

Developing the Concept:

Ask: Do you need water to keep alive? How do you know? How can you tell grass in your yard needs water? What can we do to find out how much water there is in some living things?

Use a piece of watermelon for the following exercise:

Ask: About how much water do you think is in the melon? What can we do to find out? (Be evaporating the water)
Pupils weigh a piece of watermelon before and after heating it. Heating will evaporate the water. Allow the students to determine the amount of water in the piece of melon.

Extending the Concept:

Ask: Do you use foods each day that have had the water removed? Name some. (frozen juice, condensed soup, etc.)

How do we restore water to these dehydrated foods? Have on hand one-half cup of three kinds of dried foods, such as prunes, raisins, apples. Weigh one quart jar without the cover. Record its weight. Weigh the half cup of each of the dried foods separately in the jar. Deduct the weight of the jar to find out the actual weight of each kind of dried food. Record the weight of each.
Pour two cups of water in each of the three jars. Put the fruit in the jar, cover and let stand overnight.
Ask: Why should the jars be covered? The next morning we can find out how much of the water was used by each of the fruits. Pour off the excess water into the measuring cup separately.
Ask: How many ounces of water were absorbed by each of the fruits? Have someone weigh each of the drained foods separately.
Ask: What part of the dried food is solid matter and what is water.

Fixing the Concept:

Write a story about "How I Depend On Water in My Everyday Life."

Materials Required:

Piece of watermelon
sauce pan
source of heat
three quart jars and covers
water
scale
measuring cup
three examples of dried fruits

Minerals - Grade 3
Lesson 14

Objective: The student will be able to list ways that man uses rocks.

Concept: Rocks are used for many things.

Purpose of the Lesson:

To show the student some of the ways we use rocks in our community.

Introducing the Concept:

Have a few stones in class such as rotten granite (from roadside) stone the size of your fist (could be crushed for gravel) pieces of granite, etc. Stones can be easily obtained at a ready-mix cement plant or chips from a monument works.

Ask: Where do rocks come from? (earth)
Are all rocks the same? (vary in color, hardness, size, etc.)

Have a piece of asphalt roofing and ask students where the small pieces come from? (crushed quartz, manufactured by 3 M Co. in Wausau)

Developing the Concept:

Ask: Where have you seen rocks being used in our community? (gravel roads, building foundations, outside walls of homes, gravestone markers) Can stones be harmful as well as helpful? (in a farmer's field) What type of stone would you like to build a house out of? (Hard rocks - if sandstone is available rub it against a hard stone and show how it crumbles easily.)

Fixing the Concept:

If possible, take a trip to granite quarry or monument works. Have rocks been used in any way in your home? (roof granuals, sidewalks, curb, cement drives, and cement block walls for basements all have crushed rocks, possibly stone in walls.)

Required Materials:

different types of rocks
piece of granite

Wildlife - Grade 3
Lesson 15

Objective: Pupils will be able to list reasons why wildlife is important.

Concept: Wildlife is an important resource.

Purpose of the Lesson:

To develop a desirable attitude toward wildlife.

Introducing the Concept:

Use pictures (replicas if available) of several wildlife species and a few domestic animals. Place these on a table or on a bulletin board. Use paired examples; e.g. a kitten and a wildcat (tiger, lion, bobcat, mountain lion.) Wild bird and a tame bird; e.g. cardinal - parakeet.

Ask: How is the tiger and the kitten alike? (cat family, padded feet, long tail--except bobcat)

Ask: How are they different? (Size, where they live, their relationship to humans)

Ask: How are the birds alike? Make comparisons with the birds as was done with the other animals.

Developing the Concept:

Have the class name as many animals they can think of. Sort or classify these into wild and domestic families.

Ask: What does wildlife need in order to live? (Food and shelter)

Ask: How does wildlife help people? (Birds eat their own weight in insects everyday. They provide sportsmanship in hunting and fishing. They provide beauty and joy in seeing these animals in the wild. They provide an opportunity for people to improve their health.)

Ask: How can people help wildlife?

1. Protect the homes of wild animals.
2. Avoid killing small living things.
3. Keep wild pets rarely. They are difficult to keep alive, normally they don't like captivity.
4. We should realize that some insects are helpful and should not be destroyed. (Bees make honey, dragon flies eat other harmful insects, insects provide birds with most of their food.)

Extending the Concept:

Ask: Why do we have game laws and why should they be obeyed? (Wildlife should be treated as a crop and the surplus should be harvested but not when babies are being born. If none are killed there will be too many animals for the amount of food.)

Small children should not have BB guns. They are not toys, they are dangerous, and can injure you very easily if they are not treated as a real gun.

Fixing the Concept:

1. Use pictures of wildlife--to illustrate the resource.
2. Make a list of wildlife needs.
3. List ways wildlife help people.
4. List ways people can help wildlife.

Birds - Grade 3
Lesson 16

Objective: The students will be able to identify ways in which birds are helpful to men.

Concept: Plants and animals can interchange matter and energy within the environment.

Purpose of Lesson:

To help pupils develop an appreciation of birds and their contribution to our lives and to know that we must help birds to meet their needs for food, water and shelter if they are to survive.

Introducing the Concept:

Share this poem or another of your own choice:

THE SECRET

We have a secret, just we three,
The robin, and I, and the sweet cherry tree;
The bird told the tree, and the tree told me,
And nobody knows it but just we three.
But, of course, the robin knows it best,
Because he built the _____
And laid the four little somethings in it--
I'm afraid I shall tell it every minute.
But if the tree and the robin don't peep,
I'll try my best the secret to keep;
Though I know when the little birds fly about
Then the whole secret will be out.

....Anonymous

Developing the Concept:

Ask: What food is a bird? (Explain that there is much we do not know about how things work in nature) Why are birds nature's greatest and most active enemy of insects? How can we find out? (give children an opportunity to use books, pamphlets, magazines, and stories to find out what and how much birds eat. (Interesting birds to study are bobwhite quail, ruby-crowned kinglet, red-eyed vireo, meadow lark, flicker, and nighthawk)

Ask: Some birds are harmful to man. Can you find evidence for that statement? What happens when birds eat poisoned insects?

Extending the Concept:

Have pupils write to Wisconsin Department of Natural Resources for a pamphlet which tells how to build birdhouses and in what areas you may expect to find certain birds.

Fixing the Concept:

Build birdhouses when the information arrives so that each child will have one for his backyard.

Audio-Visual Materials:

Film: "Birds of the Dooryard"

Wildflowers - Grade 3
Lesson 17

Objective: The children will realize that there is a need for the protection of wildflowers.

Concept: Some living things need the help of people to assure their survival.

Purpose of the Lesson:

To acquaint children with laws of Wisconsin that protect wildflowers which is a step to keep plants from becoming extinct.

Introducing the Concept:

The teacher should have an arrangement of wildflowers and another of garden flowers to help introducing the concept.
Ask the following questions:

1. What are these flowers? (Garden flowers)
   " " " " (Wildflowers)
2. How are the two arrangements different? (size, color, shape, foliage, where they grow, etc.)
3. Where did the garden flowers grow?
4. Who planted the seeds? Do they have to be replanted each year?
5. Where did the wildflowers grow?
6. What do we mean by the word wildflowers? Are wildflowers replanted each year? Why do they come up again and again each year?

Developing the Concept:

What do you think about picking wildflowers; should any of them be picked? Explain how the common and plentiful wildflowers should be picked. (Cut or broken easily so that their roots are not disturbed.)
Do you think some should not be picked at all? Why not?
What will happen if we continue to carelessly pick and destroy the rare wildflowers?
What can be done to prevent this?

Extending the Concept:

Use slides on wildflowers available from Hugh Curtis. Get information about state laws concerning conservation of plants and flowers.

Children can make posters showing pictures of wildflowers on the conservation list which are protected by laws of the state.

The following poem may be read:

THE FLOWERS

All the names I now from nurse:
Gardener's garters, shepherd's purse:
Bachelor's buttons, lady's smock
And the lady hollyhock.

Fairy places, fairy things,
Fairy woods where the wild bee wings,
Tiny trees for tiny dames--
These must all be fairy names!

Tiny woods below whose boughs
Shady fairies weave a house;
Tiny treetops, rose or rhyme,
Where the braver fairies climb!

Fair are grown-up people's trees
But the fairest woods are these;
Where, if I were not so tall,
I should live for good and all.

....Robert Louis Stevenson

Materials Required:

Vase of garden and wildflowers or charts that illustrate examples of each.

Forests - Grade 3
Lesson 18

Objective: Pupils will be able to explain how forests help to build soil.

Concept: Forests help to build soil.

Purpose of the Lesson:

To develop an understanding of how forests help to build soil.

Introducing the Concept:

Get a sample of forest floor and spread it on white paper about the size of a newspaper. Have a sample of rather poor garden soil and spread this out on a white sheet of paper.

Developing the Concept:

Examine the forest soil with magnifying glasses. Samples may also be viewed under a microscope. Look for living organisms. Many of these organisms are microscopic in size; but many tiny animals are visible to the naked eye such as mites, millipedes, etc. Explain to the group that each year about 2 tons of debris, consisting of dead leaves, flower parts, fruits, twigs, logs, excrement and animal remains fall on each acres of forest. The debris is decomposed by the living organisms and forms humus. Make a comparison of the amount of humus in the forest soil and that of the garden soil. Explain that the forest soil acts as a large sponge during a heavy rainfall and absorbs the moisture.

Ask:
1. What do you think would happen if all the forests were removed?
2. Why is it not a good idea to cut forests off from steep hillsides?
3. Do other plants help hold the soil?

Extending the Concept:

Find out how long it takes to form an inch of top soil.

Fixing the Concept:

Show the power of a falling raindrop. Fill a small shallow box with garden soil and one with forest soil. Place the boxes on white papers. Punch a hole in the bottom of a tin can so that water will fall in drops. Hold the dripping can about five feet above the box. Observe the newspaper for spatters. Compare the rainfall spatter on the garden soil to that of the forest soil. What conclusions can you draw?

Materials Required:

Sample of forest soil
Sample of garden soil
Newspaper
microscope
hand lenses

Audio-Visual Materials:

Filmstrip: No. 1400 "Building the Soil"

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